CFTD2083T

3WAY COMBINATION UNIT

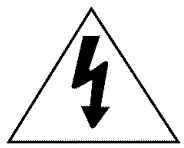
Owner's Instructions

AA68-02545B

Warning! Important Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.

This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

Note to CATV system installer: This reminder is provided to call CATV system installer's attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Caution: FCC/CSA regulations state that any unauthorized changes or modifications to this equipment may void the user's authority to operate it.

Caution: To prevent electric shock, match the wide blade of plug to the wide slot, and fully insert the plug.

Attention: pour eviter les chocs electriques, introduire la lame le plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

Important: One Federal Court has held that unauthorized recording of copyrighted TV programs is an infringement of U.S. copyright laws. Certain Canadian programs may also be copyrighted and any unauthorized recording in whole or in part may be in violation of these rights.

To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

Thank You for Choosing Akai

Thank you for choosing Akai! Your new Akai TV represents the latest in television technology. We designed it with easy-to-use on-screen menus and closed captioning capabilities, making it one of the best products in its class. We are proud to offer you a product that will provide convenient, dependable service and enjoyment for years to come.

Important Safety Information

Always be careful when using your TV receiver. To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.

- Read all safety and operating instructions before operating your TV.
- Keep the safety and operating instructions for future reference.
- Heed all warnings on the TV receiver and in the operating instructions.
- Follow all operating and use instructions.
- Unplug the TV receiver from the wall outlet before cleaning. Use a damp cloth; do not use liquid or aerosol cleaners.
- Never add any attachments and/or equipment without approval of the manufacturer. Such additions can increase the risk of fire, electric shock, or other personal injury.
- Do not use the TV receiver where contact with or immersion in water is a possibility, such as near bath tubs, sinks, washing machines, swimming pools, etc.
- Do not place the TV on an unstable cart, stand, tripod, bracket, or table where it can fall. A falling TV can cause serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the TV. Follow the manufacturer's instructions when mounting the unit, and use a mounting accessory recommended by the manufacturer. Move the TV and cart with care. Quick stops, excessive force, and uneven surfaces can make the unit and cart unsteady and likely to overturn.

- Provide ventilation for the TV receiver. The unit is designed with slots in the cabinet for ventilation to protect it from overheating. Do not block these openings with any object, and do not place the TV receiver on a bed, sofa, rug, or other similar surface. Do not place it near a radiator or heat register. If you place the TV receiver on a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions for mounting.
- Operate your TV receiver only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.
- Use only a grounded or polarized outlet. For your safety, this TV is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still does not fit, contact your electrician to replace your outlet.

- Protect the power cord. Power supply cords should be routed so that they won't be walked on or pinched by objects placed on or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

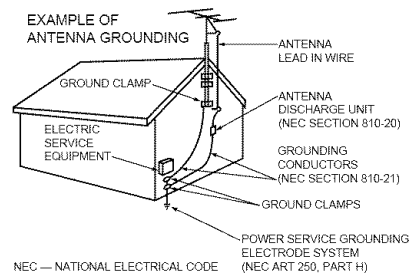
- Unplug the TV from the wall outlet and disconnect the antenna or cable system during a lightning storm or when left unattended and unused for long periods of time. This will prevent damage to the unit due to lightning and power-line surges.

- Avoid overhead power lines. An outside antenna system should not be placed in the vicinity of overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outside antenna system, be extremely careful to keep from touching the power lines or circuits. Contact with such lines can be fatal.

- Do not overload the wall outlet or extension cords. Overloading can result in fire or electric shock.

- Do not insert anything through the openings in the unit, where they can touch dangerous voltage points or damage parts. Never spill liquid of any kind on the TV.

- Ground outdoor antennas. If an outside antenna or cable system is connected to the TV, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No.70-1984, provides information about proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



- Do not attempt to service the TV yourself. Refer all servicing to qualified service personnel. Unplug the unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - when the power-supply cord or plug is damaged
  - if liquid has been spilled on the unit or if objects have fallen into the unit
  - if the TV has been exposed to rain or water
  - if the TV does not operate normally by following the operating instructions
  - if the TV has been dropped or the cabinet has been damaged
  - when the TV exhibits a distinct change in performance
- If you make adjustments yourself, adjust only those controls that are covered by the operating instructions. Adjusting other controls may result in damage and will often require extensive work by a qualified technician to restore the TV to normal.

- When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in additional damage to the unit.

- Upon completion of any service or repairs to this TV, ask the service technician to perform safety checks to determine that the TV is in a safe operating condition.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference that may cause undesired operation.

This television receiver provides display of television closed captioning in accordance with § 15.119 of the FCC rules.

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Chapter One

Your New 3way Combination unit

List of Features

Your 3way Combination Unit was designed with the latest technology.
This 3way Combination Unit is a high-performance unit that includes the following special features:

TV Features

- Full Flat screen
- Automatic timer to turn the 3way Combination Unit on and off
- Adjustable picture and sound settings that can be stored in the 3way Combination Unit's memory
- Automatic channel tuning for up to 181 channels
- A special filter to reduce or eliminate reception problems
- Fine tuning control for the sharpest picture possible
- A built-in multi-channel sound decoder for stereo and bilingual listening
- Built-in, dual channel speakers
- A special sleep timer
- V-chip function

DVD Features

- DTS digital output for DTS-enhanced DVDs
- Playback MP3 files from CD-ROM

Discs which cannot be played with this player.

- DVD-ROM
- CD-ROM
- CDI
- HD layer of super Audio CD
- CDGs play audio only, not graphics.
- CDV

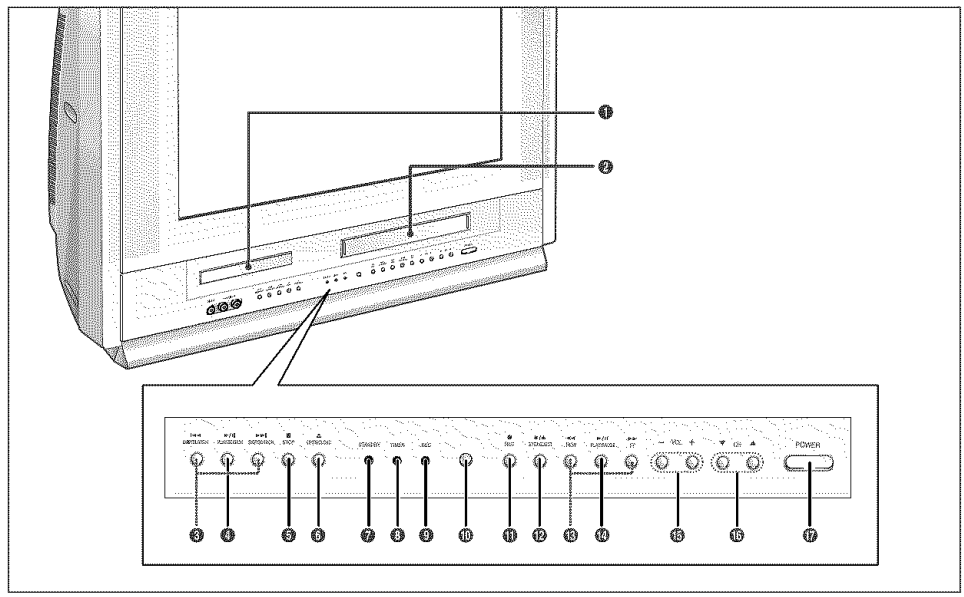
VCR Features

- Hi-Fi Stereo VCR.
- 4 heads for superior slow motion and stop action
- Playback of S-VHS tapes at better than standard resolution
- Real time counter

Familiarizing Yourself with The 3way Combination Unit

Front Panel Buttons

The buttons on the front panel control your 3way Combination Unit's basic features, including the on-screen menu. To use the more advanced features, you must use the remote control.



❶ Disc tray
Load the disc here.

❷ VCR deck
Insert a standard VHS video tape.

❸ SKIP/SEARCH (DVD)
Press to skip or search the title, chapter or track.

❹ PLAY/PAUSE (DVD)
Press to play or pause the disc

❺ STOP (DVD)
Press to stop the disc

❻ OPEN/CLOSE (DVD)
Press to open and close the disc tray.

❼ STAND BY indicator
Lit when TV power is Off.

❽ TIMER indicator
Lit when the program times are stored.

❾ REC indicator
Lit when the VCR is recording.

❿ Remote Control Sensor
Aim the remote control towards this spot on the TV.

⓫ REC (VCR)
Press to begin recording.

⓬ STOP/EJECT (VCR)
Press to stop a video tape during play, record, rewind, or fast forward. Press to eject a video tape if the tape is stopped.

⓭ REW/FF (VCR)
Press to rewind/fast forward a videotape.

⓮ PLAY/PAUSE (VCR)
Press to play or pause a video tape.

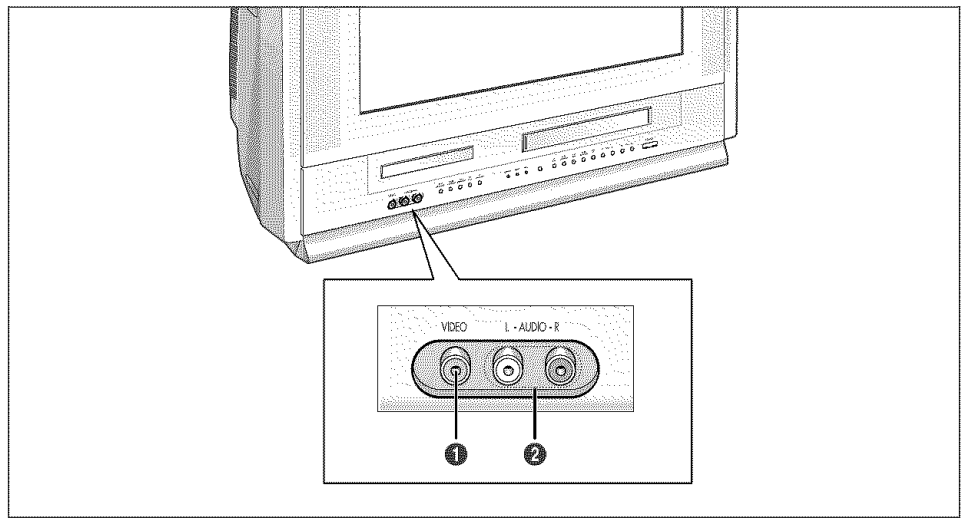
⓯ VOLUME – , +
Press to increase or decrease the volume. Also used to select items on the on-screen menu.

⓰ CHANNEL ▼ and ▲
Press to change channels. Also press to highlight various items on the on-screen menu.

⓱ POWER
Press to turn the TV on and off.

Front Panel Jacks

You can use the Front panel jacks to connect an A/V component that is used only occasionally, such as a camcorder or video game. (For information on connecting equipment, see pages 2.1 – 2.9.)



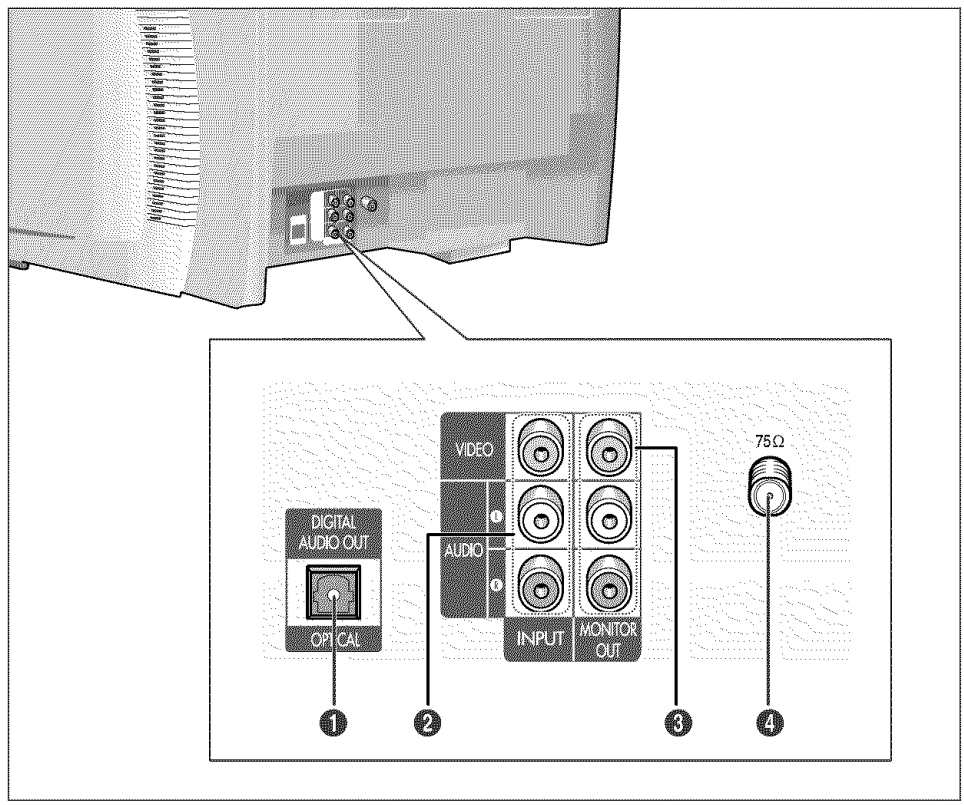
1 VIDEO IN jack
Used to connect a video signal from a camcorder or video game.

2 AUDIO IN jacks
Used to connect the audio signals from a camcorder or video game.

Rear Panel Jacks

Use the rear panel jacks to connect an A/V component that will be connected continuously, such as a VCR or a camcorder.

For more information on connecting equipment, see pages 2.1 – 2.9.



1 DIGITAL AUDIO OUTPUT
Connect to a compatible dolby digital receiver.

2 VIDEO-AUDIO INPUTS
Used to connect video-audio signals from VCRs, laserdisc players and similar devices.

3 AUDIO-VIDEO MONITOR OUTPUTS
Connect to the audio-video input jacks of a recording VCR.

4 VHF/UHF
Connect to an antenna or to a cable 3way Combination Unit system.

Remote Control (TV Function Buttons)

You can use the remote control up to about 23 feet from the TV. When using the remote, always point it directly at the TV.

❶ POWER
Turns the 3way Combination Unit on and off.

❷ +100
Press to select channels over 100. For example, to select channel 121, press "+100," then press "2" and "1."

❸ VOL +, VOL -
Press increase or decrease the volume.

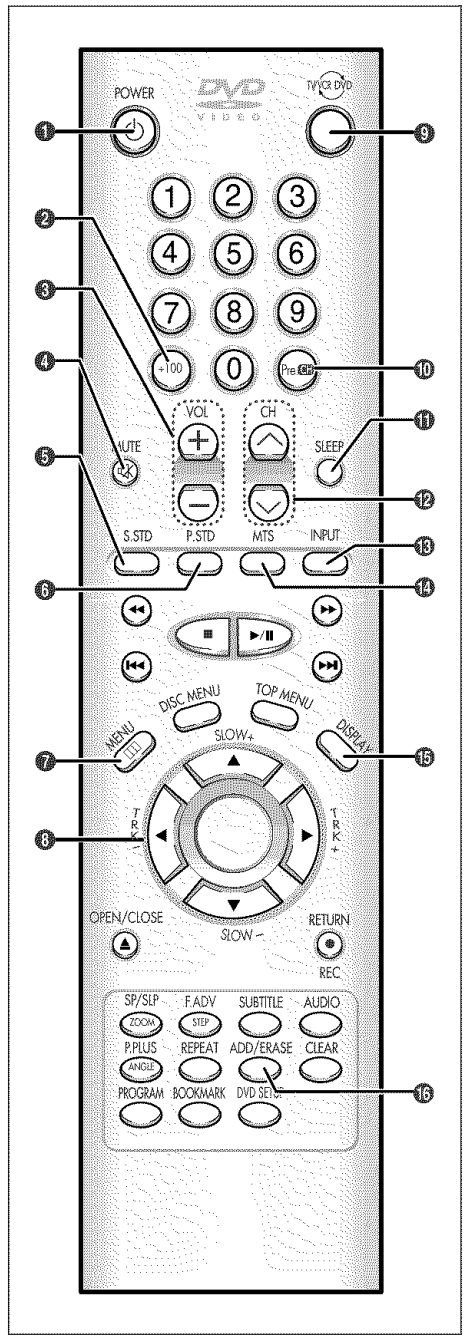
❹ MUTE
Press to temporarily cut off the sound.

❺ S.STD
Adjust the TV sound by selecting one of the preset factory settings (or select your personal, customized sound settings).

❻ P.STD
Adjust the TV picture by selecting one of the preset factory settings (or select your personal, customized picture settings).

❼ MENU
Displays the main on-screen menu.

❽ Control the cursor in the menu
Allows move to items.



❾ TV/VCR ↔ DVD selection
Press to switch between TV/VCR, and DVD mode.

❿ PRE-CH
Tunes to the previous channel.

⓫ SLEEP
Press to select a preset time interval for automatic shutoff.

⓬ CH∨ and CH∧ (Channel Down/Up)
Press CH∨ or CH∧ to change channels.

⓭ INPUT
Press to watch the TV picture or a picture from a connected component (VCR, camcorder etc...)

⓮ MTS (Multichannel Television Stereo)
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).

⓯ DISPLAY
Press to see the channel, time, current disc mode, audio/video settings etc., on-screen.

⓰ ADD/ERASE
Press to add or erase channels in the TV's memory.

Remote Control (DVD Function Buttons)

❶ Search
Press to search forward/backward through a disc.

❷ Stop
Press to stop a disc.

❸ DISC MENU
Press to display the disc menu.

❹ ENTER
Confirms a selection.

❺ OPEN/CLOSE
Press to open or close the disc tray.

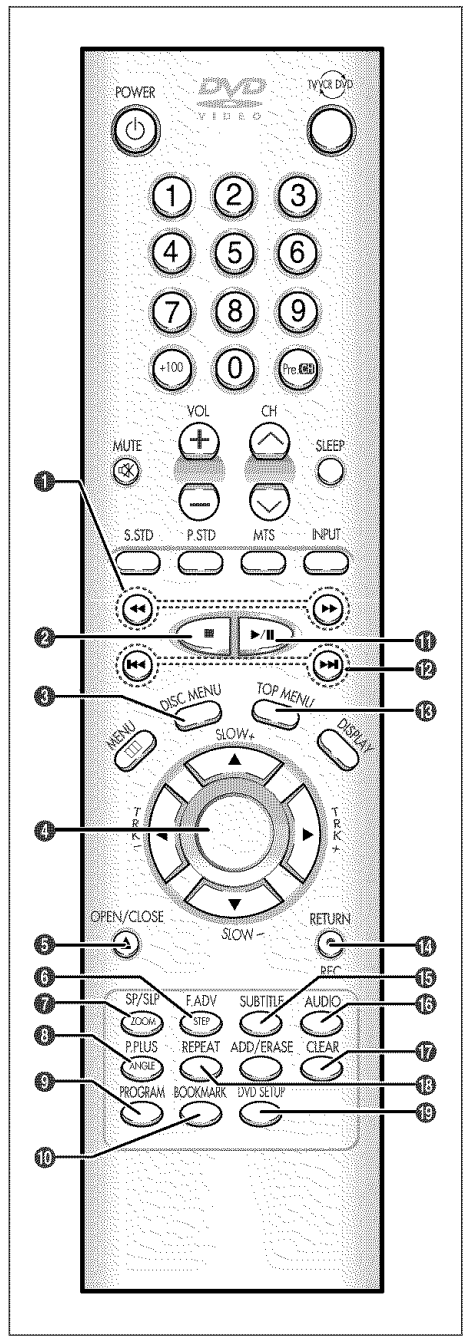
❻ STEP
Press to advance play one frame at a time.

❼ ZOOM
Press to zoom-in during playback, slow motion or pause mode on the selected area of a scene.

❽ ANGLE
Press to access various camera angles on a DVD.

❾ PROGRAM
For random and program play.

❿ BOOKMARK
Press to memorize scenes for replay.



⓫ Play/pause
Press to play or pause disc play.

⓬ Skip
Press to skip the title, chapter, or track.

⓭ TOP MENU
Press to display the top menu on a DVD or CD/VCD disc.

⓮ RETURN
Press to return to a previous menu or exit.

⓯ SUBTITLE
Press to display the subtitle language name abbreviation on-screen.

⓰ AUDIO
Press to access various audio functions on a disc.

⓱ CLEAR
Press to clear on-screen displays.

⓲ REPEAT
Press to repeat play a title, chapter, track, or disc.

⓳ DVD SETUP
Displays the DVD play's Setup menu.

Remote Control (VCR Function Buttons)

❶ REW/F.F
Press to rewind/fast forward a video tape.

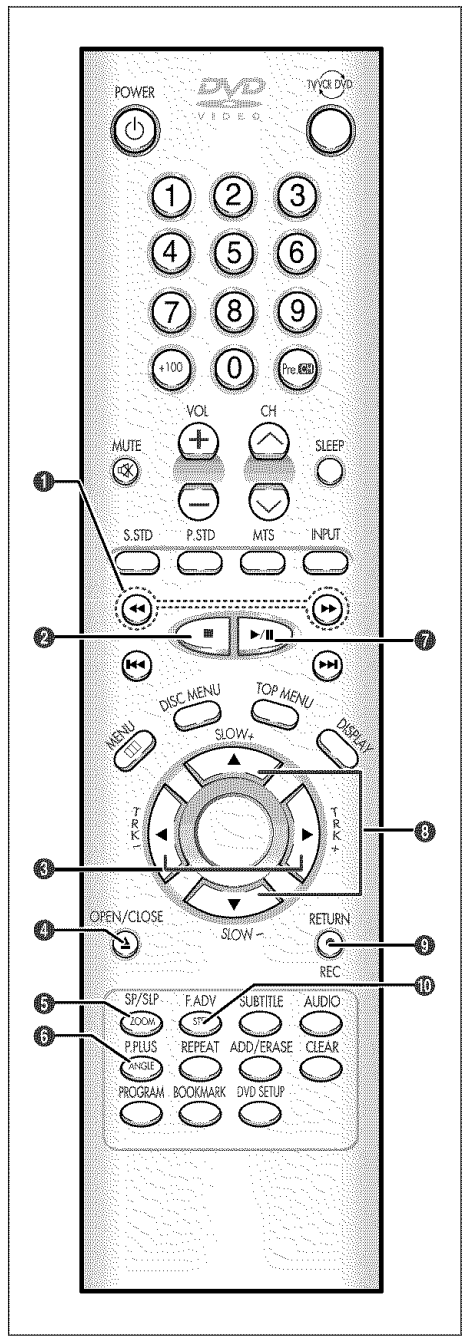
❷ Stop
Press to stop a video tape.

❸ TRK+, – (tracking)
Press to adjust tape tracking.

❹ OPEN/CLOSE
Press to eject a tape.

❺ SP/SLP
Press to select the tape recording speed.

❻ P.PLUS
Press to compensate for a poor rental tape.



❼ Play/pause
Press to play or pause a tape.

❽ SLOW+, –
Press to watch a tape in slow motion.

❾ REC
Press to begin recording.

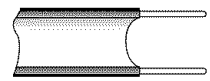
❿ F.ADV (frame advance)
Press to advance a tape frame-by-frame.

Chapter Two

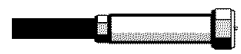
INSTALLATION

Connecting VHF and UHF Antennas

If your antenna has a set of leads that look like this, see "Antennas with 300-ohm Flat Twin Leads," below.



If your antenna has one lead that looks like this, see "Antennas with 75-ohm Round Leads," on page 2.2.



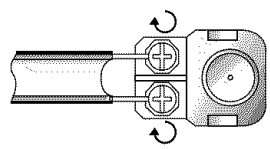
If you have two antennas, see "Separate VHF and UHF Antennas," on page 2.2.

Antennas with 300-ohm Flat Twin Leads

If you are using an off-air antenna (such as a roof antenna or "rabbit ears") that has 300-ohm twin flat leads, follow the directions below.

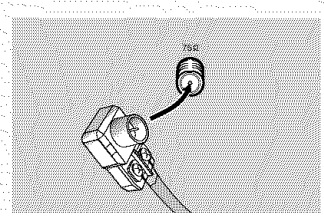
1

Place the wires from the twin leads under the screws on the 300-75 ohm adaptor (not supplied). Use a screwdriver to tighten the screws.



2

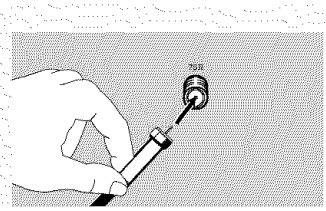
Plug the adaptor into the VHF/UHF terminal on the bottom of the back panel.



Antennas with 75-ohm Round Leads

1

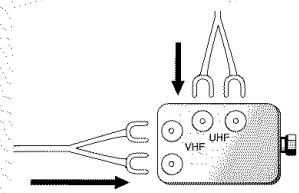
Plug the antenna lead into the VHF/UHF terminal on the bottom of the back panel.



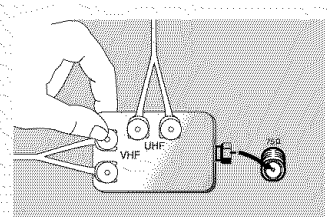
Separate VHF and UHF Antennas

If you have two separate antennas for your TV (one VHF and one UHF), you must combine the two antenna signals before connecting the antennas to the TV. This procedure requires a an optional combiner-adaptor (available at most electronics shops).

1 Connect both antenna leads to the combiner.



2 Plug the combiner into the VHF/UHF terminal on the bottom of the rear panel.

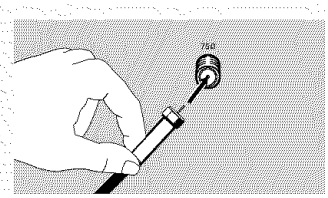


Connecting Cable TV

To connect to a cable TV system, follow the instructions below.

Cable without a Cable Box

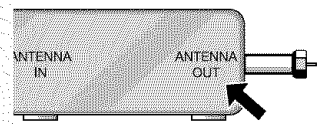
1 Plug the incoming cable into the VHF/UHF antenna terminal on back of the TV.



◄ Because this TV is cable-ready, you do not need a cable box to view unscrambled cable channels.

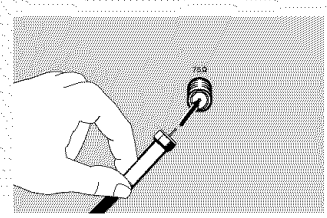
Connecting to a Cable Box that Descrambles <u>All</u> Channels

1 Find the cable that is connected to the ANTENNA OUT terminal on your cable box.



◄ This terminal might be labeled "ANT OUT," "VHF OUT," or simply, "OUT."

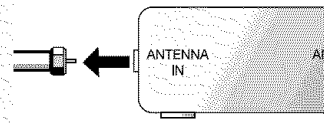
2 Connect the other end of this cable to the VHF/UHF antenna terminal on the back of the TV.



Connecting to a Cable Box that Descrambles Some Channels

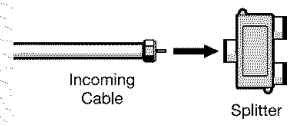
If your cable box descrambles only some channels (such as premium channels), follow the instructions below. You will need a two-way splitter, an RF (A/B) switch, and four lengths of coaxial cable. (These items are available at most electronics stores.)

1 Find and disconnect the cable that is connected to the ANTENNA IN terminal on your cable box.

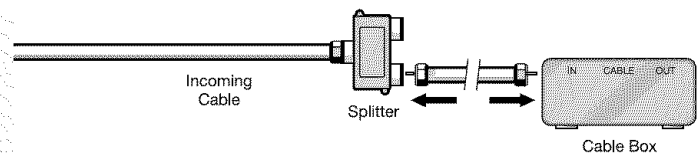


◄ This terminal might be labeled "ANT IN," "VHF IN," or simply, "IN."

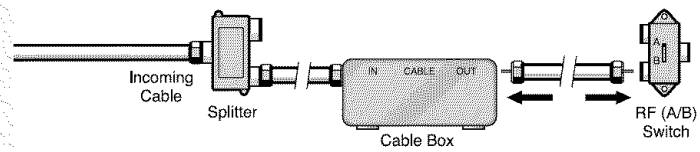
2 Connect this cable to a two-way splitter.



3 Connect a coaxial cable between an OUTPUT terminal on the splitter and the IN terminal on the cable box.



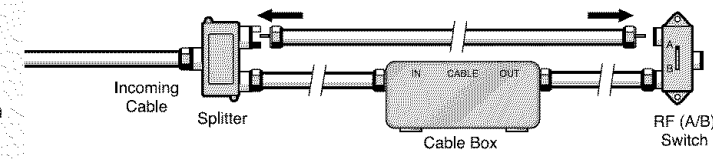
4 Connect a coaxial cable between the ANTENNA OUT terminal on the cable box and the B- IN terminal on the A/B switch.



continued...

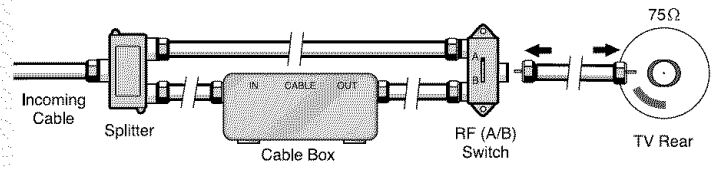
5

Connect another cable between the other OUT terminal on the splitter and the A- IN terminal on the RF (A/B) switch.



6

Connect the last coaxial cable between the OUT terminal on the RF (A/B) switch and the VHF/UHF terminal on the rear of the TV.

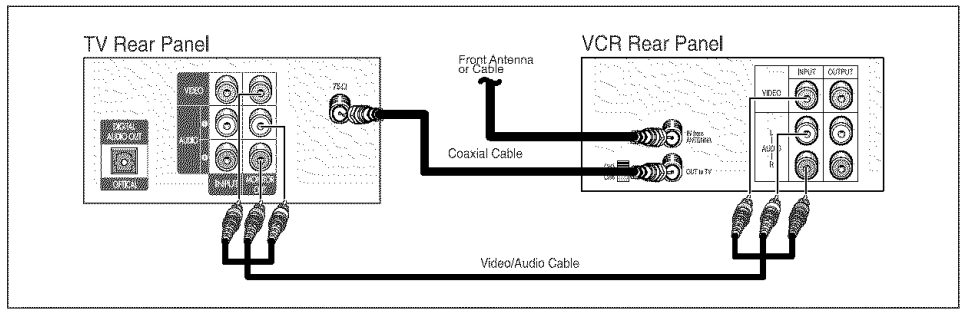


After you've made this connection, set the A/B switch to the "A" position for normal viewing. Set the A/B switch to the "B" position to view scrambled channels. (When you set the A/B switch to "B," you will need to tune your TV to the cable box's output channel, which is usually channel 3 or 4.)

Connecting a Second VCR to Record from the TV

Your TV can send out signals of its picture and sound to be recorded by a second VCR.

To do this, connect your second VCR as follows:



1

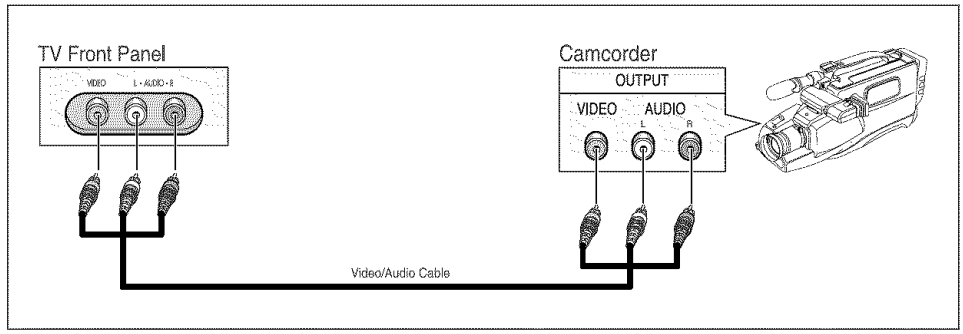
Connect a coaxial cable between the ANTENNA OUT terminal on the VCR and the antenna terminal on the TV. A coaxial cable is usually included with a VCR. (If not, check your local electronics store).

2

Connect a set of audio cables between the VIDEO/AUDIO OUT jacks on the TV and the VIDEO/AUDIO IN jacks on the VCR.
(The VCR input jacks might be either on the front or on back of the VCR.)
If you have a mono VCR, connect L(mono) to VCR audio out using only one audio cable.
Refer to your VCR's instructions for more information about how to record using this kind of connection.

Connecting a Camcorder

The front panel jacks on your TV make it easy to connect a camcorder to your TV. They allow you to view the camcorder tapes without using a VCR. (Also see "Viewing a VCR or Camcorder Tape" on page 3.17)



1

Locate the A/V output jacks on the camcorder. They are usually found on the side or rear of the camcorder.

2

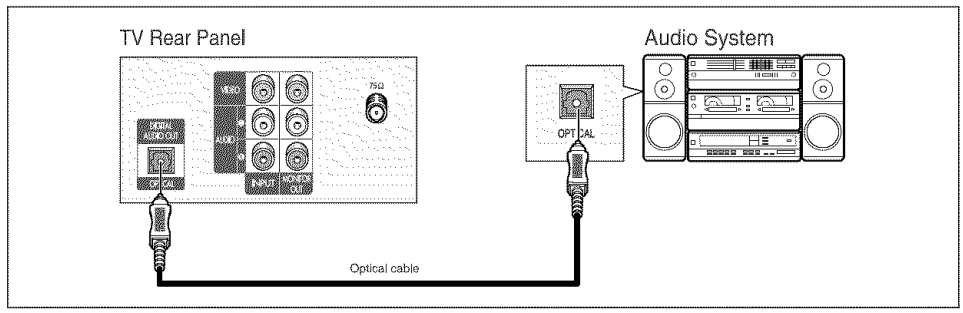
Connect an video/audio cable between the VIDEO/AUDIO OUTPUT jack on the camcorder and the VIDEO/AUDIO terminals on the front of the TV.

If you have mono camcorder, connect L(mono) to camcorder audio out using only one audio cable.

The audio-video cables shown here are usually included with a Camcorder. (If not, check your local electronics store.) If your camcorder is stereo, you need to connect a set of two cables.

Connecting an Audio System (When playing a DVD)

The DIGITAL AUDIO OUT connector is used for equipment, such as an audio system (to take full advantage of the Surround sound effect).



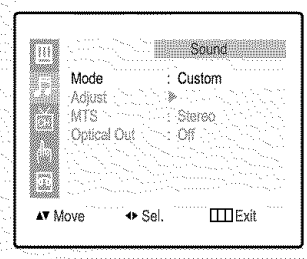
Connect an optical cable between the DIGITAL AUDIO IN jacks on the AUDIO and the DIGITAL AUDIO OUT jack on the TV.

Setting the Optical jack On/Off

1

Press the **MENU** button.

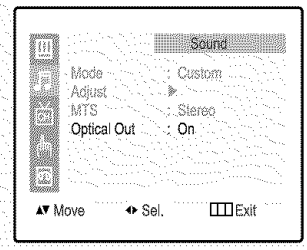
Press the UP/DOWN▲▼ buttons to select "Sound", then press the LEFT/RIGHT ◄► buttons.



2

Press the UP/DOWN▲▼ buttons to select "Optical", then press the LEFT/RIGHT ◄► buttons to select "On" or "Off".

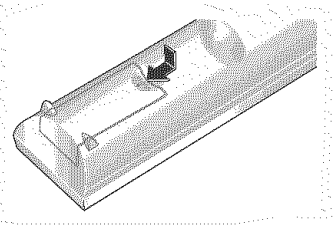
Press the **MENU** button to exit.



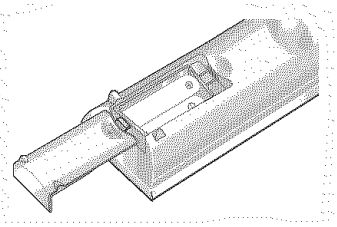
Note: The Optical On/Off function in the menu doesn't appear while a normal TV channel (RF channel) is being watched.

Installing Batteries in the Remote Control

1
Slide the cover out completely.

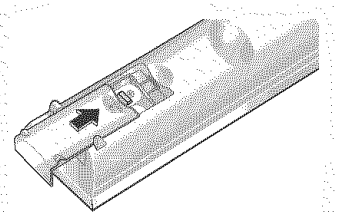


2
Install two AA size batteries.



◄ Make sure to match the "+" and "–" ends of the batteries with the diagram inside the compartment.

3
Replace the cover.



◄ Remove the batteries and store them in a cool, dry place if you won't be using the remote control for a long time.

The remote control can be used up to about 23 feet from the TV.

(Assuming typical TV usage, the batteries last for about one year.)

Chapter Three

TV OPERATION

Turning the TV On and Off

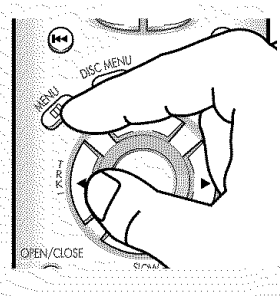
Press the **POWER** button on the remote control.
You can also use the Power button on the front panel.

Viewing the Menus and On-Screen Displays

Viewing the Menus

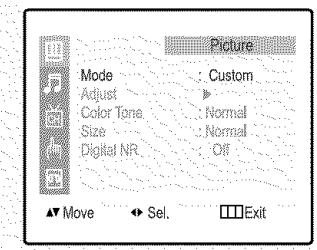
1
With the power on, press the **MENU** button.

The main menu appears on the screen: Picture, Sound, Channel, Function and VCR setup.



◄ The on-screen menus disappear from the screen after about thirty seconds.

2
Use the UP/DOWN▲▼ buttons to select one of the 5 items. Then press the LEFT/RIGHT ◄► buttons to access the item's sub-menu.



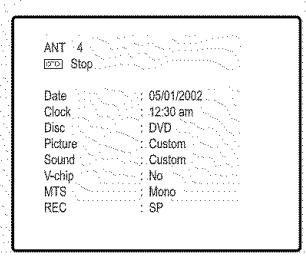
3
Press the **MENU** button to exit.

Viewing the Display

The display identifies the current channel and the status of certain audio-video settings.

1
Press the **DISPLAY** button on the remote control.

The TV will display the channel, Time, disc mode, the status of certain picture and sound settings, V-chip and the type of sound.



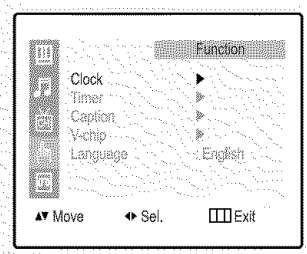
◄ The on-screen displays disappear after about ten seconds.

Selecting a Menu Language

1

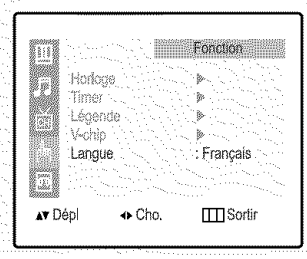
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Function".
Press the LEFT/RIGHT ◀▶ buttons.



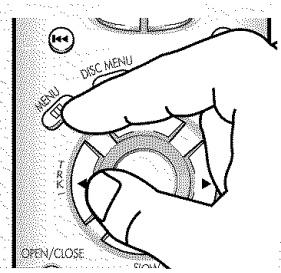
2

Press the UP/DOWN▲▼ buttons to select "Language".
Press the LEFT/RIGHT ◀▶ buttons to select the appropriate language: English, Spanish, or French.



3

Press the **MENU** button to exit.



Memorizing the Channels

Your TV can memorize and store all of the available channels for both "off-air" (antenna) and cable channels. After the available channels are memorized, use the CH ▲ and CH ▼ buttons to scan through the channels. This eliminates the need to change channels by entering the channel digits. There are three steps for memorizing channels: selecting a broadcast source, memorizing the channels (automatic) and adding and deleting channels (manual).

Selecting the Video Signal-source

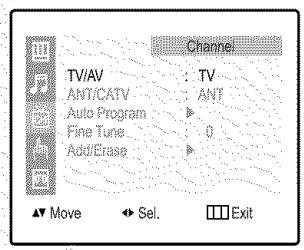
Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the TV (i.e., an antenna or a cable system).

1

Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Channel".

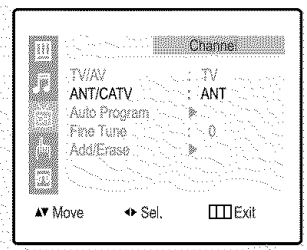
Press the LEFT/RIGHT ◄► buttons.



2

Press the UP/DOWN▲▼ buttons to select "ANT/CATV".

Repeatedly press the LEFT/RIGHT ◄► buttons to cycle through these choices: ANT (antenna), STD, HRC or IRC (all cable TV).



Note: STD, HRC and IRC identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area.

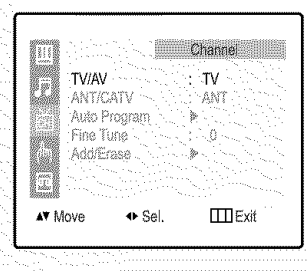
At this point the signal source has been selected. Proceed to "Storing Channels in Memory" (next page).

Storing Channels in Memory (Automatic Method)

1

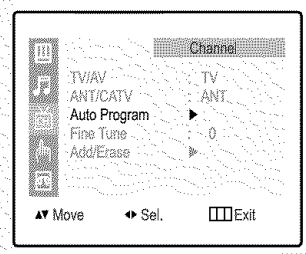
First, select the correct signal source (ANT, STD, HRC, IRC). See steps 1~2 on previous page.

Press the UP/DOWN▲▼ buttons to select "Channel", then press the LEFT/RIGHT ◀▶ buttons.



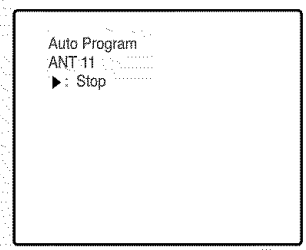
2

Press the UP/DOWN▲▼ buttons to select "Auto Program".



3

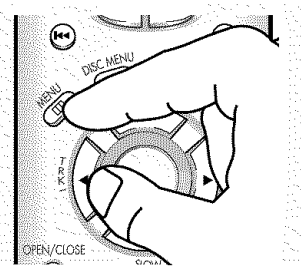
Press the LEFT/RIGHT ◀▶ buttons.
TV will begin memorizing all of the available channels.



◀◀ The TV automatically cycles through all of the available channels and stores them in memory. This takes about one to two minutes.
Press the RIGHT ▶ button at any time to interrupt the memorization process and return to the Channel menu.

4

After all the available channels are stored, the Auto program menu disappears. Press the **MENU** button to exit.

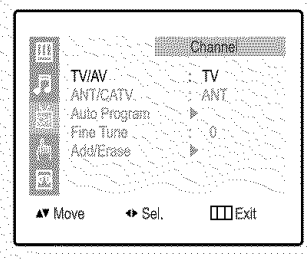


Adding and Erasing Channels (Manual Method)

1

Press the **MENU** button to display the menu.

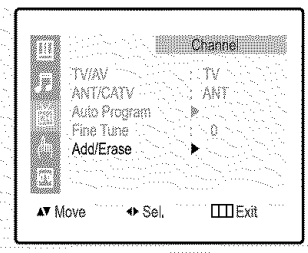
Press the UP/DOWN▲▼ buttons to select "Channel".
Press the LEFT/RIGHT ◄► buttons.



2

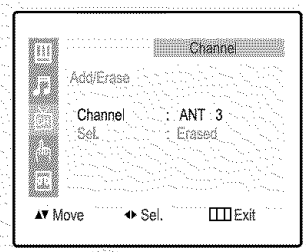
Press the UP/DOWN▲▼ buttons to select "Add/Erase".

Press the LEFT/RIGHT ◄► buttons.



3

Press the LEFT/RIGHT ◄► buttons or the number buttons to select the channel you want to add or erase.

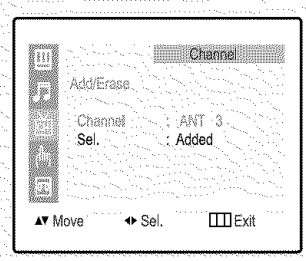


4

Press the UP/DOWN▲▼ buttons to select "Sel.".

Press the LEFT/RIGHT ◄► buttons to select "Added" or "Erased".

Press the **MENU** button to exit.

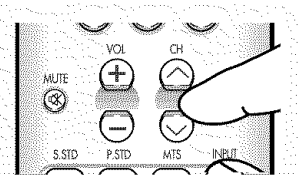


◄ You can view any channel (including an erased channel) by using the number buttons or UP/DOWN▲▼ buttons on the remote control.

Changing Channels

Using the Channel Buttons

Press the **CH** ∨ or **CH** ∧ buttons to change channels.

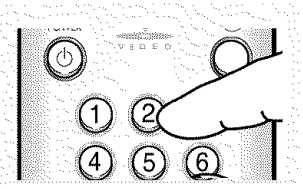


◄ When you press the CH ∧ or CH ∨ buttons, the TV changes channels in sequence. You will see all the channels that the TV has memorized. (The TV must have memorized at least three channels.) You will not see channels that were either erased or not memorized.

Directly Accessing Channels

Use the number buttons to quickly tune to any channel.

Press the number buttons to go directly to a channel. For example, to select channel 27, press "2," then "7." The TV will change channels when you press the second number.



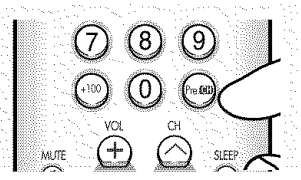
When you use the number buttons, you can directly select channels that were either erased or not memorized.

To select a channel over 100, press the +100 button. (For channel 122, press "+100," then "2," then "2.")

To change to single-digit channels (0–9) faster, press "0" before the single digit. (For channel "4," press "0," then "4.")

Using the Pre-CH Button to select the Previous Channel

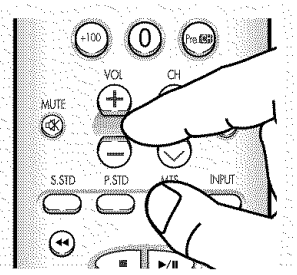
Press the **PRE.CH** button. The TV will switch to the last channel viewed.



◄ To quickly switch between two channels that are far apart, tune to one channel, then use the number button to select the second channel. Then, use the Pre-CH button to quickly alternate between them.

Adjusting the Volume

Press the **VOL +** or **VOL-** buttons to increase or decrease the volume.



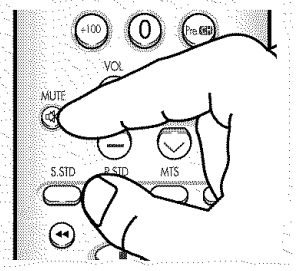
Using Mute

At any time, you can temporarily cut off the sound using the Mute button.

1

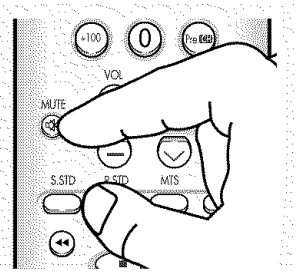
Press the **MUTE** button and the sound cuts off.

The word "Mute" will appear in the lower-left corner of the screen.



2

To turn mute off, press the **MUTE** button again, or simply press either the **VOL +** or **VOL-** buttons.



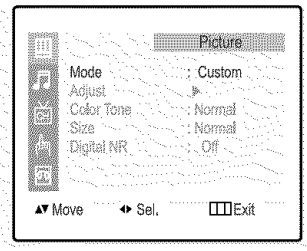
Customizing the Picture

You can use the on-screen menus to change the contrast, brightness, tint, color, and sharpness according to personal preference. (Alternatively, you can use one of the "automatic" settings. See next page.)

1

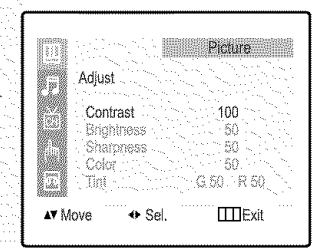
Press the **MENU** button to display the menu.

Press the LEFT/RIGHT ◀▶ buttons to display the Picture menu.



2

Press the UP/DOWN▲▼ buttons to select "Adjust", then press the LEFT/RIGHT ◀▶ buttons.

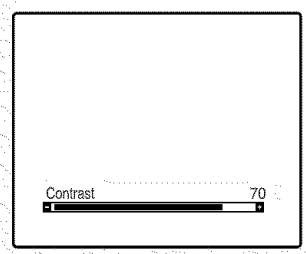


3

Press the UP/DOWN▲▼ buttons to select particular item.

Press the LEFT/RIGHT ◀▶ buttons increase or decrease the value of a particular item.

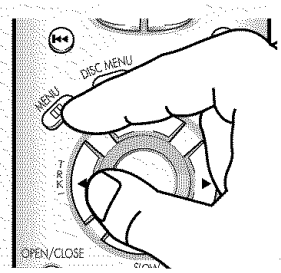
Press the **MENU** button to exit.



◀ After adjusting an item, the gauge will automatically disappear (after about 3 seconds).

4

Press the **MENU** button to exit.



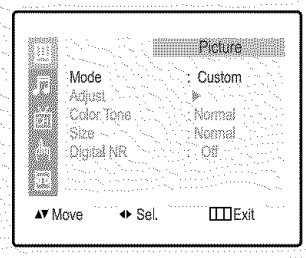
Using Automatic Picture Settings

Your TV has three automatic picture settings ("Standard", " Natural" " Sports" and "Mild") that are preset at the factory. You can activate either Standard, Natural, Sports or Mild by pressing P.STD (or by making a selection from the menu). Or, you can select "Custom" which automatically recalls your personalized picture settings.

1

Press the **MENU** button to display the menu.

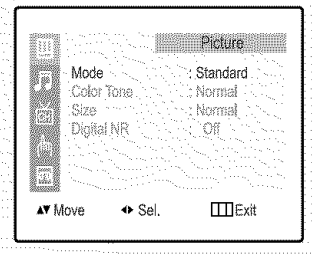
Press the LEFT/RIGHT ◀▶ buttons to display the Picture menu.



2

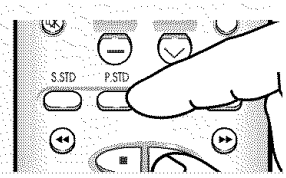
Press the LEFT/RIGHT ◀▶ buttons to select the "Standard," " Natural," "Sports," " Mild," or "Custom" picture setting.

Press the **MENU** button to exit.



Alternate method:

Simply press the **P.STD** button on the remote control to select one of the standard picture settings.



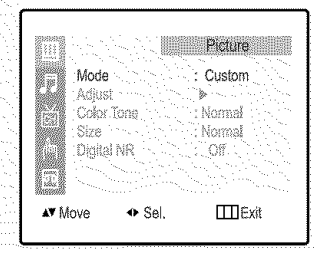
- Choose *Standard* for the standard factory settings.
- Choose *Natural* for optimal indoor screen condition.
- Choose *Sports* for the realism and excitement of sports programs.
- Choose *Mild* ("Mild Contrast") when viewing the TV in low light, or when playing video games.
- Choose *Custom* if you want to adjust the settings according to personal preference (see "Customizing the Picture, page 3.8).

Changing the Color Tone

1

Press the **MENU** button to display the menu.

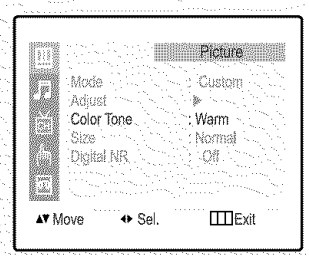
Press the LEFT/RIGHT ◀▶ buttons to display the Picture menu.



2

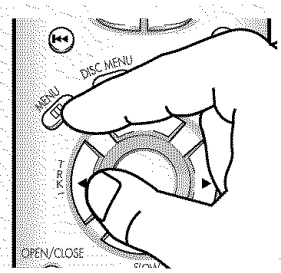
Press the UP/DOWN▲▼ buttons to select Color Tone.

Press the LEFT/RIGHT ◀▶ buttons to select "Normal", "Warm" or "Cool" according to personal preference.



3

Press the **MENU** button to exit.

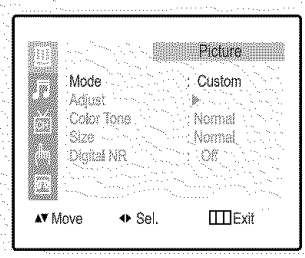


Changing the Screen Size

1

Press the **MENU** button to display the menu.

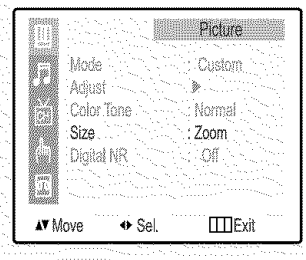
Press the LEFT/RIGHT ◀▶ buttons to display the Picture menu.



2

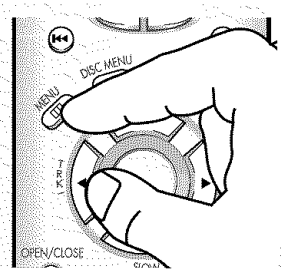
Press the UP/DOWN▲▼ buttons to select "Size".

Press the LEFT/RIGHT ◀▶ buttons to select "Normal", "Zoom" or "16:9".



3

Press the **MENU** button to exit.



- Normal : Sets the picture to 4:3 normal mode. This is a standard TV screen size.
- Zoom : Sets the picture to Zoom mode.
- 16:9 : Sets the picture to 16:9 mode.

Fine Tuning Channels

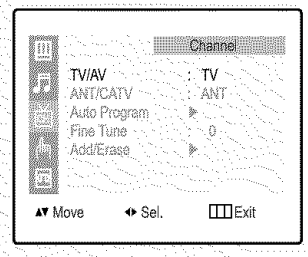
Use fine tuning to manually adjust a particular channel for optimal reception.

1

Select the appropriate channel.

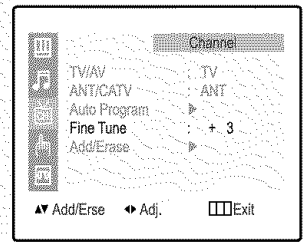
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Channel".
Press the LEFT/RIGHT ◄► buttons.



2

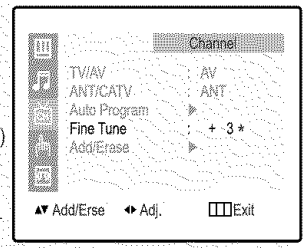
Press the UP/DOWN▲▼ buttons to select "Fine tune".
Press the LEFT/RIGHT ◄► buttons to adjust the fine tuning.



3

To store the fine tuning setting in the TV's memory, press the **UP** ▲ button. (An asterisk "*" will appear.)

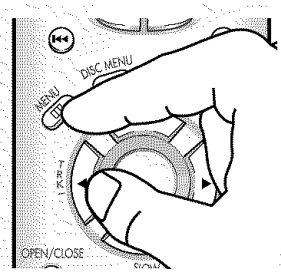
To reset the fine tuning to "0," press the **DOWN** ▼ button.



◄ After you adjust the fine tuning, the color of Channel No. will turn into red if you press the DISPLAY button while watching this channel.

4

Press the **MENU** button to exit.



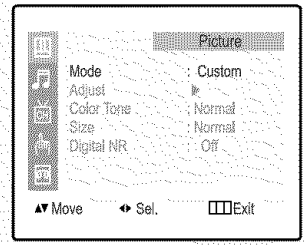
Digital Noise Reduction

If the broadcast signal received by your TV is weak, you can activate the Digital Noise Reduction feature to help reduce any static and ghosting that may appear on the screen.

1

Press the **MENU** button to display the menu.

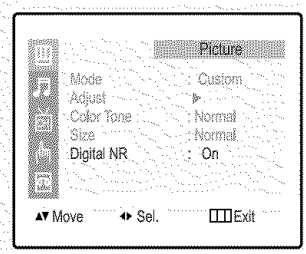
Press the LEFT/RIGHT ◀▶ buttons to display the Picture menu.



2

Press the UP/DOWN▲▼ buttons to select "Digital NR".

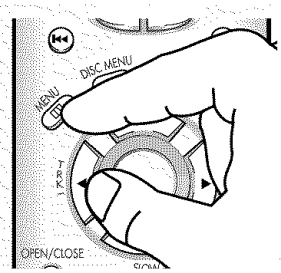
Press the LEFT/RIGHT ◀▶ buttons to select Digital NR "On".



◀◀ Pressing the LEFT/RIGHT ◀▶ buttons will alternate between "On" and "Off".

3

Press the **MENU** button to exit.



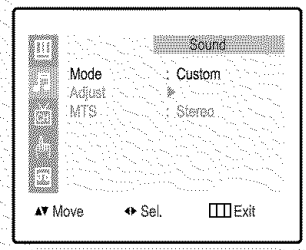
Customizing the Sound

The sound settings can be adjusted to suit your personal preferences. (Alternatively, you can use one of the "automatic" settings. See next page.)

1

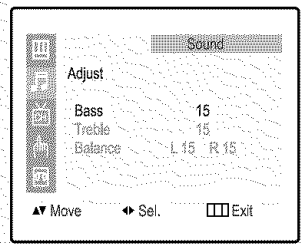
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Sound", then press the LEFT/RIGHT ◄► buttons.



2

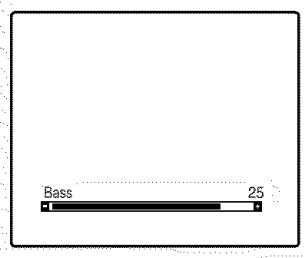
Press the UP/DOWN▲▼ buttons to select "Adjust", the press the LEFT/RIGHT ◄► buttons.



3

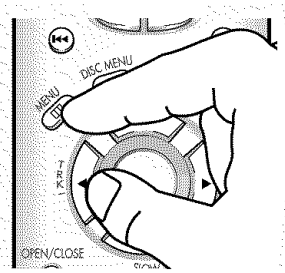
Press the UP/DOWN▲▼ buttons to select a particular item.

Press the LEFT/RIGHT ◄► buttons increase or decrease the value of a particular item.



4

Press the **MENU** button to exit.



◄ After adjusting an item, the gauge will automatically disappear (after about 3 seconds).

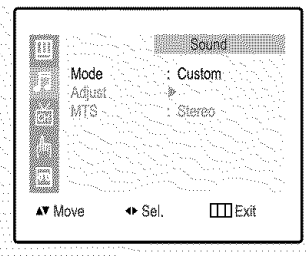
Using Automatic Sound Settings

Your TV has four automatic sound settings ("Standard," "Music," "Movie" and "Speech") that are preset at the factory. You can activate any of them by pressing the S.STD button (or by making a selection from the on-screen menu). Or, you can select "Adjust," which automatically recalls your personalized sound settings.

1

Press the **MENU** button to display the menu.

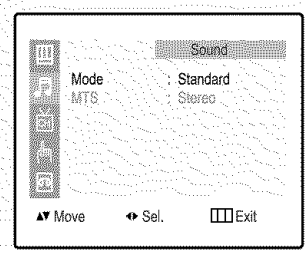
Press the UP/DOWN▲▼ buttons to select "Sound", then press the LEFT/RIGHT ◀▶ buttons.



2

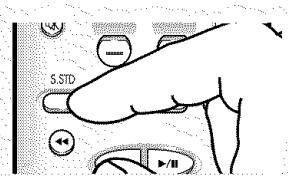
Press the LEFT/RIGHT ◀▶ buttons to select the "Standard," "Music," "Movie," "Speech" or "Custom" sound setting.

Press the **MENU** button to exit.



Alternate method:

Simply press the the **S.STD** button on the remote control to select one of the standard sound settings.



- Choose *Standard* for the standard factory settings.
- Choose *Music* when watching music videos or concerts.
- Choose *Movie* when watching movies.
- Choose *Speech* when watching a show that is mostly dialogue (i.e., news).
- Choose *Custom* to recall your personalized settings.

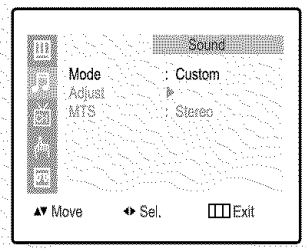
Choosing a Multi-Channel Soundtrack (MTS)

Depending on the particular program being broadcast, you can listen to stereo, mono, or a Separate Audio Program. (SAP audio is usually a foreign-language translation. Sometimes SAP has unrelated information like news or weather.)

1

Press the **MENU** button to display the menu.

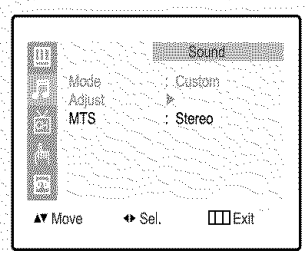
Press the UP/DOWN▲▼ buttons to select Sound. Press the LEFT/RIGHT ◄► buttons.



2

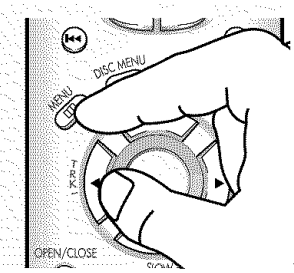
Press the UP/DOWN▲▼ buttons to select "MTS".

Press the LEFT/RIGHT ◄► buttons repeatedly to select "Mono," "Stereo" or "SAP".



3

Press the **MENU** button to exit.



- Choose *Mono* for channels that are broadcasting in mono, or if you are having difficulty receiving a stereo signal.
- Choose *Stereo* for channels that are broadcasting in stereo.
- Choose *SAP* to listen to the Separate Audio Program, which is usually a foreign-language translation.

You can also change the MTS setting by pressing the "MTS" button on the remote control.

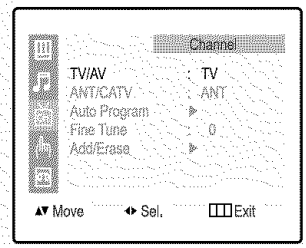
Viewing a VCR or Camcorder Tape

You must select the appropriate mode in order to view the VCR or Camcorder signal on the TV.

1

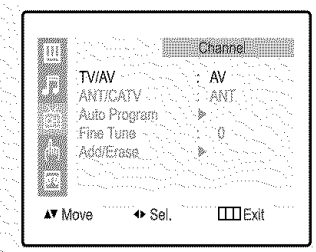
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Channel", then press the LEFT/RIGHT ◀▶ buttons.



2

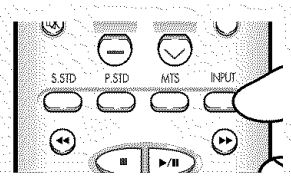
Press the LEFT/RIGHT ◀▶ buttons. You will switch between viewing the signals coming from equipment connected to the TV's A/V jacks, and the TV signal.



Press the **MENU** button to exit.

Alternate method:

Simply press the **INPUT** button on the remote control one or more times until the required input is displayed.



Setting the Clock

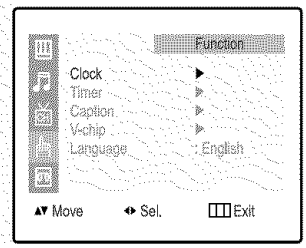
Setting the clock is necessary in order to use the various timer features of the TV. Also, you can check the time while watching the TV (Just press the DISPLAY button).

Option 1: Setting the Clock Manually

1

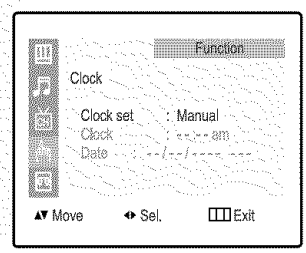
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◄► buttons.



2

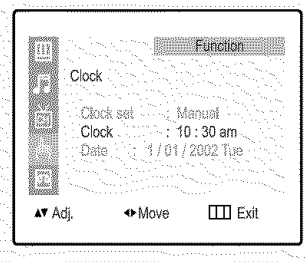
Press the LEFT/RIGHT ◄► buttons to select "Manual".



3

Press the UP/DOWN▲▼ buttons to select "Clock", then press the RIGHT ► button.

Press the UP/DOWN▲▼ buttons repeatedly until the correct hour appears.



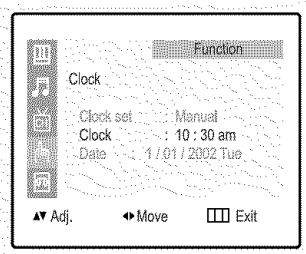
◄ When selecting the hours, be sure to select the proper time of day (am or pm).

You can change the hours by pressing the UP▲ or DOWN ▼ button repeatedly (or by holding down either of these buttons).

4

After the hour is entered, Press the RIGHT ► (at this point the minutes digits will be highlighted). Press the UP/DOWN▲▼ buttons to select the correct minutes.

After selecting the correct minutes, press the RIGHT ► button.



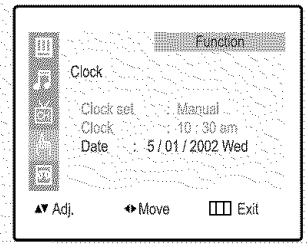
◄ The time will appear every time you press the DISPLAY button.

Setting the Date

5

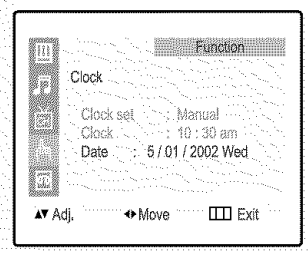
Press the UP/DOWN▲▼ buttons to select "Date", then press the RIGHT ▶ button.

Press the UP/DOWN▲▼ buttons to to set the current month.



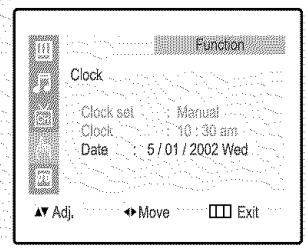
6

Press the RIGHT ▶ button, then press the UP/DOWN▲▼ buttons to to set the current day.



7

Press the RIGHT ▶ button, then press the UP/DOWN▲▼ buttons to to set the current year.



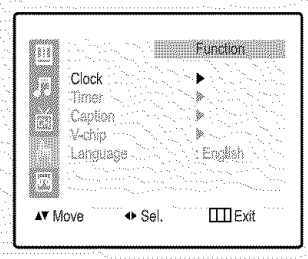
◀ If you make a mistake, press LEFT ◀ to move back to the incorrect item. Press the UP/DOWN ▲▼ buttons to change the item.

Option 2: Using the Local PBS Channel to Automatically Set the TV Clock

1

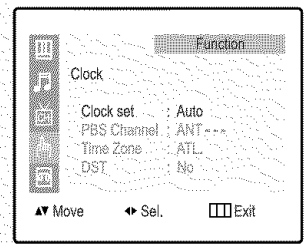
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◄► buttons.



2

Press the LEFT/RIGHT ◄► buttons to select "Auto".

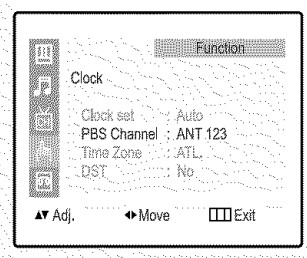


3

Press the UP/DOWN▲▼ buttons to select "PBS channel", then press the RIGHT ► button to activate the channel-number field.

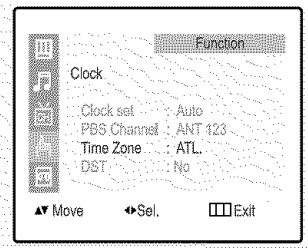
Press the UP/DOWN▲▼ buttons to select your local PBS channel.

Press the RIGHT ► button.



4

Press the UP/DOWN▲▼ buttons to select "Time Zone", then press the RIGHT ▶ button to change the Time zone. Sequence: ATL., EAST, CEN., MTN., PAC., ALAS., HAW..

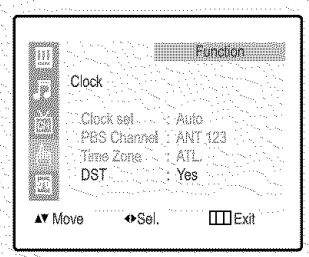


5

Press the UP/DOWN▲▼ buttons to select "DST" (Daylight saving time), then press the LEFT/RIGHT ◀▶ buttons to indicate "Yes" or "No".

The clock is set.

Press the **MENU** button to exit.

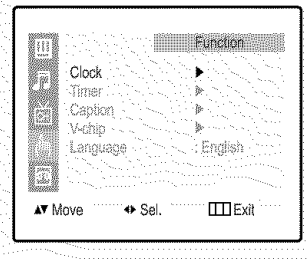


Setting the On/Off Timer

1

Press the **MENU** button to display the menu.

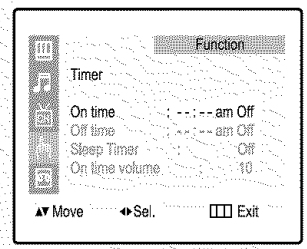
Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◀▶ buttons.



◄ Before using the timer, you must set the TV's clock. (See "Setting the Clock" on page 3.18)

2

Press the UP/DOWN▲▼ buttons to select "Timer", then press the LEFT/RIGHT ◀▶ buttons.

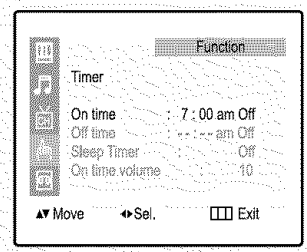


3

Press the UP/DOWN▲▼ buttons to select "On Time."

Press the RIGHT ▶ button to highlight the "On time" hours.

Press the UP/DOWN▲▼ buttons repeatedly to select the appropriate hours (i.e., the hour when the TV will turn on.)

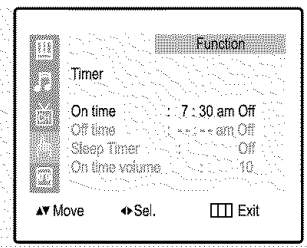


◄ When you set the hours, make sure the correct time of day (am or pm) appears to the right of the hour.

4

Press the RIGHT ▶ button to highlight the "On time" minutes.

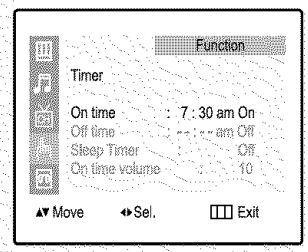
Press the UP/DOWN▲▼ buttons repeatedly to select the appropriate minutes.



5

Press the RIGHT ▶ button to highlight "Off".

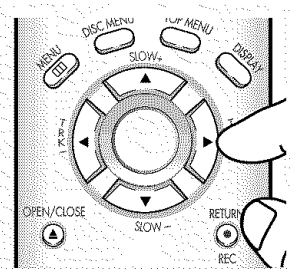
Press the UP/DOWN▲▼ buttons to turn the on timer "On." (Repeatedly pressing the UP/DOWN▲▼ buttons will alternate between On and Off.)



◄ To deactivate the "On time," select "Off" during this step.

6

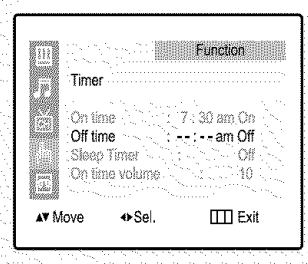
When finished, press the RIGHT ▶ button.



7

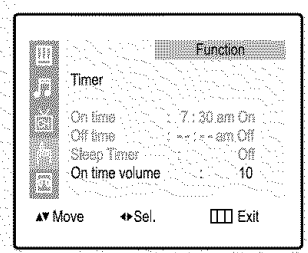
To set the Off time, press the UP/DOWN▲▼ buttons to select "Off Time".

Press the RIGHT ▶ button and set the hours and minutes. (Follow the same procedure as in steps 1~6 above.)



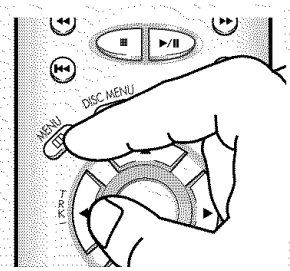
8

If you want to set the volume level when the TV turns on, press the DOWN ▼ button to select "On time volume". Press the LEFT/RIGHT ◀▶ buttons to set the volume level you want when the TV turns on.



9

When finished setting the timer, press the **MENU** button to exit.



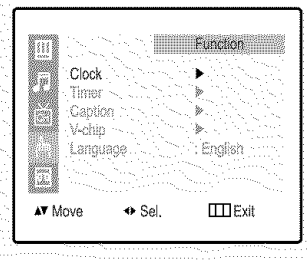
Setting the Sleep Timer

The sleep timer automatically shuts off the TV after a preset time (from 15 to 180 minutes).

1

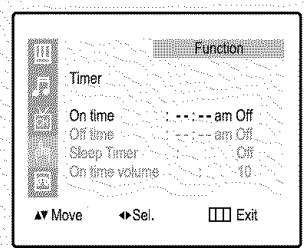
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◄► buttons.



2

Press the UP/DOWN▲▼ buttons to select "Timer", then press the LEFT/RIGHT ◄► buttons.

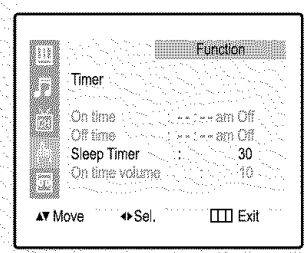


3

Press the UP/DOWN▲▼ buttons to select "Sleep Timer."

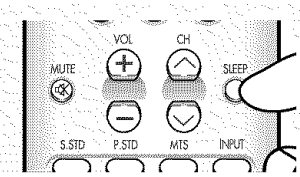
Press the RIGHT ► button repeatedly until the appropriate time interval appears (any of the preset values from "Off" to "180").

Press the **MENU** button to exit.



Alternate method:

Simply press **SLEEP** repeatedly until the appropriate time interval appears (any of the preset values from "Off" to "180").



◄ After about 3 seconds, the sleep display will disappear from the screen, and the time interval will be set.

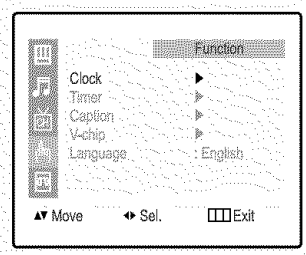
Viewing Closed Captions

Your TV decodes and displays the closed captions that are broadcast with certain TV shows. These captions are usually subtitles for the hearing impaired or foreign-language translations. All VCRs record the closed caption signal from television programs, so home-recorded video tapes also provide closed captions. Most DVDs and pre-recorded commercial video tapes provide closed captions as well. Check for the closed caption symbol in your television schedule and on the tape's packaging: CC .

1

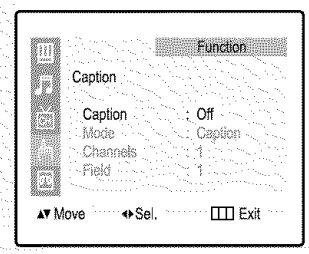
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◀▶ buttons.



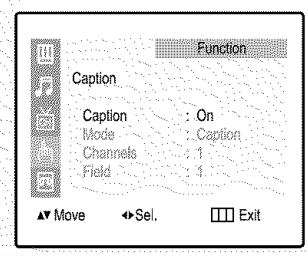
2

Press the UP/DOWN▲▼ buttons to select "Caption", then press the LEFT/RIGHT ◀▶ buttons.



3

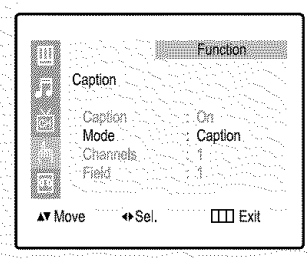
Press the LEFT/RIGHT ◀▶ buttons to turn closed captioning on/off.



4

Press the UP/DOWN▲▼ buttons to select "Mode".

Press the LEFT/RIGHT ◀▶ buttons to select "Caption" or "Text."



5

Depending on the particular broadcast, it might be necessary to make changes to "Channels" and "Field":
Use the UP/DOWN▲▼, LEFT/RIGHT ◀▶ buttons to make the changes. (Follow the same procedure as in steps 3~4 above.)
Press the **MENU** button to exit.

◀ Misspellings and unusual characters sometimes occur during closed caption transmissions, especially those of live events. There may be a small delay before captions appear when you change channels. These are not malfunctions of the TV.

◀ In **caption mode**, captions appear at the bottom of the screen, and they usually cover only a small portion of the picture.

In **text mode**, information unrelated to the program, such as news or weather, is displayed. Text often covers a large portion of the screen.

◀ Different channels and fields display different information: Field 2 carries additional information that supplements the information in Field 1. (For example, Channel 1 may have subtitles in English, while Channel 2 has subtitles in Spanish.)

Using the V-Chip

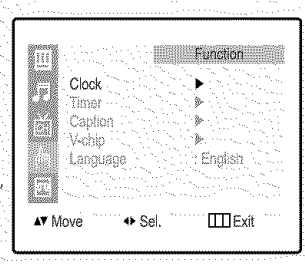
The V-Chip feature automatically locks out programming that is deemed inappropriate for children. The user must first enter a PIN (personal ID number) before any of the V-Chip restrictions can be set up or changed.

Setting Up Your Personal ID Number (PIN)

1

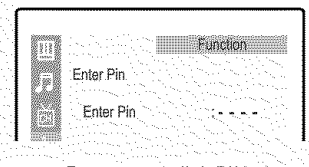
Press the **MENU** button to display the menu.

Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◀▶ buttons.



2

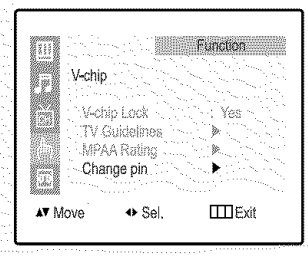
Press the UP/DOWN▲▼ buttons to select "V-Chip". Press the LEFT/RIGHT ◀▶ buttons.



The "Enter pin" screen will appear. Enter your 4-digit PIN number. Note: The default PIN number for a new TV set is "**0-0-0-0.**"

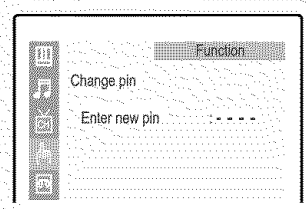
3

After entering a valid PIN number, the "V-chip mode" screen will appear. Press the UP/DOWN▲▼ buttons to select "Change pin".

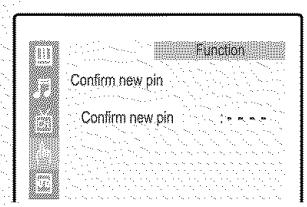


4

While the "Change pin" field is selected, press the LEFT/RIGHT ◀▶ buttons. The Change pin screen will appear. Choose any 4-digits for your PIN and enter them.



As soon as the 4 digits are entered, the "Confirm new pin" screen appears. Re-enter the same 4 digits. When the Confirm screen disappears, your PIN has been memorized. Press the **MENU** button to exit.



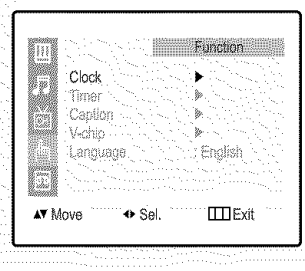
◀ Note: If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to 0-0-0-0:
POWER OFF ➔ MUTE ➔ 8 ➔ 2 ➔ 4 ➔ POWER ON.

How to Enable/Disable the V-Chip

1

Press the **MENU** button to display the menu.

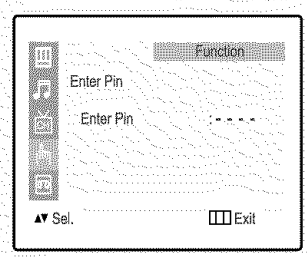
Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◀▶ buttons.



2

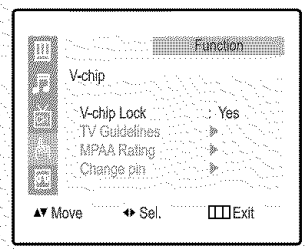
Press the UP/DOWN▲▼ buttons to select "V-Chip". Press the LEFT/RIGHT ◀▶ buttons.

The "Enter pin" screen will appear. Enter your 4-digit PIN number.



3

After entering a valid PIN number, the "V-chip" screen will appear. To enable the V-Chip feature, press the LEFT/RIGHT ◀▶ buttons so that the "V-Chip lock" field is Yes. (Pressing the LEFT/RIGHT ◀▶ buttons will alternate between Yes and No.)



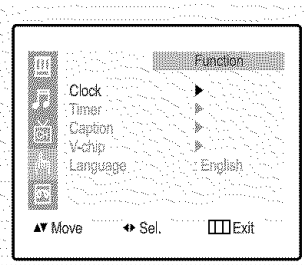
How to Set up Restrictions Using the "TV guidelines"

First, set up a personal identification number (PIN), and enable the V-Chip. (See previous section.) Parental restrictions can be set up using either of two methods: The TV guidelines or the MPAA rating.

1

Press the **MENU** button to display the menu.

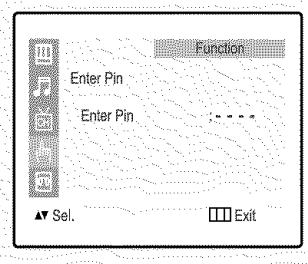
Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◀▶ buttons.



2

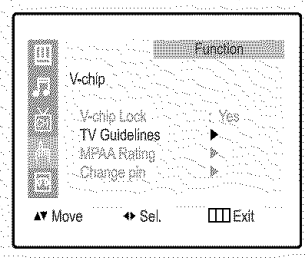
Press the UP/DOWN▲▼ buttons to select "V-Chip". Press the LEFT/RIGHT ◀▶ buttons.

The "Enter pin" screen will appear. Enter your 4-digit PIN number.



3

Press the UP/DOWN▲▼ buttons to select "TV Guidelines".

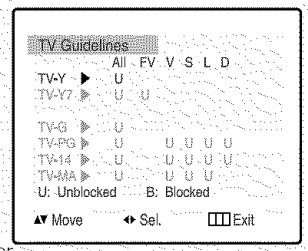


4

Press the LEFT/RIGHT ◀▶ buttons. The "TV guidelines" screen will appear. Press the UP/DOWN▲▼ buttons to select one of the six age-based categories:

TV-Y Young children
TV-Y7 Children 7 and over

TV-G General audience
TV-PG Parental guidance
TV-14 Viewers 14 and over
TV-MA Mature audience



◀◀ Note: These categories consist of two separate groups: TV-Y and TV-Y7 (young children through age 7), and TV-G through TV-MA (everybody else).

The restrictions for these two groups work independently: If a household includes very young children as well as young adults, the TV guidelines must be set up separately for each age group. (See next step.)

5

At this point, one of the TV-Ratings is selected.

Press the LEFT/RIGHT ◀▶ buttons: Depending on your existing setup, a letter "U" or "B" will be selected. (U= Unblocked, B= Blocked)

While the "U" or "B" is selected, press the UP/DOWN▲▼ buttons to block or unblock the category. Press the LEFT/RIGHT ◀▶ buttons to save the TV guidelines. A TV-Rating will be selected. To select a different TV-Rating, press the UP/DOWN▲▼ buttons and then repeat the process.

Note 1: The TV-Y7, TV-PG, TV-14 and TV-MA have additional options. See the next step to change any of the following sub-ratings:

FV: **F**antasy **v**iolence
D: Sexual suggestive **d**ialog
L: Adult **l**anguage
S: **S**exual situation
V: **V**iolence

Note 2: The V-Chip will automatically block certain categories that are "more restrictive." For example, if you block "TV-Y" category, then TV-Y7 will automatically be blocked. Similarly, if you block the TV-G category, then all the categories in the "young adult" group will be blocked (TV-G, TV-PG, TV-14 and TV-MA). The sub-ratings (D, L, S, V) work together similarly. (See next section.)

6

How to set the FV, D, L, S and V sub-ratings.

First, select one of these TV-Ratings: TV-Y7, TV-PG, TV-14 or TV-MA (See Step 4, on previous page).
Next, while the TV-Rating is selected, repeatedly press the LEFT/RIGHT ◄► buttons. This will cycle through the available sub-ratings (FV,L, S, D or V).

A letter ("U" or "B") will be displayed for each sub-rating. While the "U" or "B" is selected, press the UP/DOWN▲▼ buttons to change the sub-rating.
Press the LEFT/RIGHT ◄► buttons to save the TV guidelines. A TV-Rating will be selected.
To select a different TV-Rating, press the UP/DOWN▲▼ buttons and then repeat the process.

Note: The V-chip will automatically block certain categories that are "More restrictive".
For example, if you block "L" sub-rating in TV-PG, then the "L" sub-ratings in TV-14 and TV-MA will automatically be blocked.

7

Press the **MENU** button to clear all the screens. (Or proceed to the next section, and set up additional restrictions based on the MPAA codes).

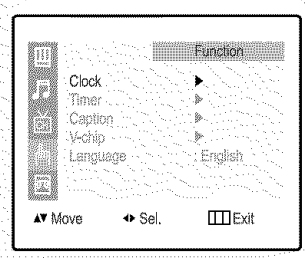
How to Set up Restrictions using the MPAA Ratings: G, PG, PG-13, R, NC-17, X

The MPAA rating system uses the Motion Picture Association of America (MPAA) system, and its main application is for movies. (Eventually, movie videocassettes and DVDs will be encoded with MPAA ratings.) When the V-Chip lock is on, the TV will automatically block any programs that are coded with objectionable ratings (either MPAA or TV-Ratings).

1

Press the **MENU** button to display the menu.

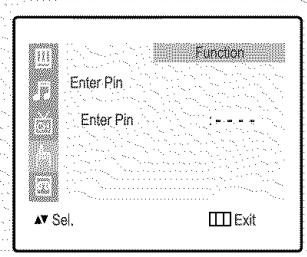
Press the UP/DOWN▲▼ buttons to select "Function", then press the LEFT/RIGHT ◄► buttons.



2

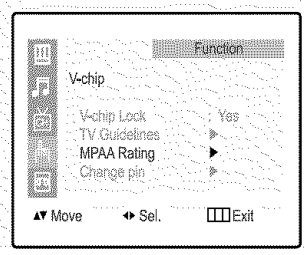
Press the UP/DOWN▲▼ buttons to select "V-Chip". Press the LEFT/RIGHT ◄► buttons.

The "Enter pin" screen will appear. Enter your 4-digit PIN number.



3

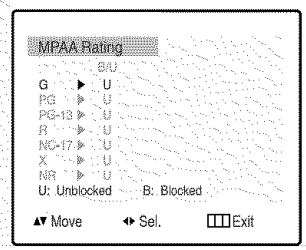
Press the UP/DOWN▲▼ buttons to select the "MPAA Rating."



4

Press the LEFT/RIGHT ◄► buttons. The "MPAA Rating" screen will appear.

Repeatedly press the UP/DOWN▲▼ buttons to select a particular MPAA category.



G	General audience (no restrictions).
PG	Parental guidance suggested.
PG-13	PG-13 (Parents strongly cautioned).
R	R (Restricted. Children under 17 should be accompanied by an adult).
NC-17	No children under age 17.
X	X (Adults only).
NR	Not rated.

While a particular category is selected, press the LEFT/RIGHT◄► buttons to activate it. A letter ("U" or "B") will be selected. Press the UP/DOWN ▲▼ buttons to select "U" or "B". Press the LEFT/RIGHT◄► buttons to save the settings and Press the MENU button to exit.

Note: The V-Chip will automatically block any category that is "more restrictive." For example, if you block the "PG-13" category, then "R," "NC-17," and "X" will automatically be blocked also.

How to Reset the TV after the V-Chip Blocks a Channel ("Emergency Escape")

If the TV is tuned to a restricted channel, the V-Chip will block it. The screen will go blank and the following message will appear: "Excessive rating."

To resume normal viewing, tune to a different channel using the number buttons. Under certain conditions (depending on the rating of the local TV programs) the V-Chip might lock out all the channels. In this case, use the V.Chip button for an "emergency escape":

1. Press the **MENU** button on the remote control.
2. Press the UP/DOWN▲▼ buttons to select the "Function", then press the LEFT/RIGHT◄► buttons.
3. Press the UP/DOWN▲▼ buttons to select the "V-Chip", then press the LEFT/RIGHT◄► buttons.
4. Enter your PIN number, and press the LEFT/RIGHT◄► buttons to temporarily disable the V-Chip Lock.

Chapter Four

DVD Operation

Playing a Disc

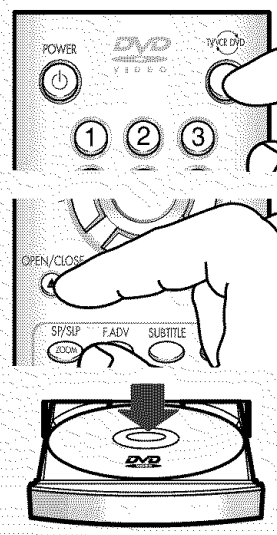
Playback

1
Press the TV/DVD button to switch the DVD mode.

2
Press the **OPEN/CLOSE** button.

3
Place a disc gently into the tray with the disc's label facing up.

4
Press the **PLAY/PAUSE (▶/II)** or **OPEN/CLOSE** button to close the disc tray.



◄◄ RESUME function

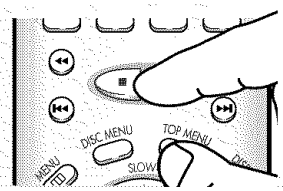
When you stop disc play, the player remembers where you stopped, so when you press the PLAY again, it will pick up where you left off (unless the disc is removed, the STOP(■) button is pressed twice or the set is unplugged).

If the player is left for 5 minutes in pause mode, it will stop.

This ⊘ icon indicates an invalid button press.

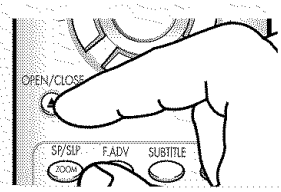
Stopping Playback

Press the **STOP(■)** button during playback.



Removing Disc

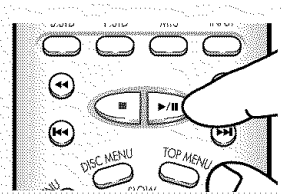
Press the **OPEN/CLOSE** button.



Pausing Playback

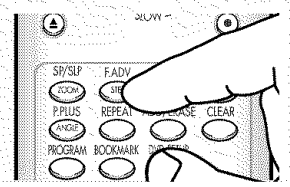
Press the **PLAY/PAUSE(▶/II)** or **STEP** button on the remote control during playback.

- Screen stops, no sound.
- To resume again, press the **PLAY/PAUSE(▶/II)** button once again.



Step Motion Playback (Except CD)

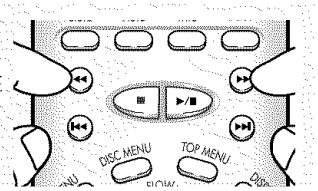
Press the **STEP** button on the remote control during playback.



- Each time the button is pressed, a new frame will appear.
- No sound is heard during STEP mode.
- Press the PLAY/PAUSE(▶/❚❚) button to resume normal playback (You can only perform step motion playback in the forward direction).

Slow Motion Playback (Except CD)

Press the **FWD(▶▶)** SEARCH button on the remote control during PAUSE or STEP mode.

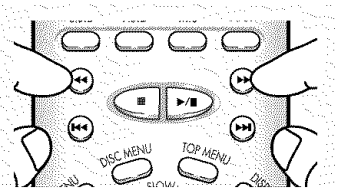


- By pressing the FWD SEARCH button, you can select slow motion playback for 1/8, 1/4 or 1/2 of normal speed.
- No sound is heard during slow mode.
- Press the PLAY/PAUSE(▶/❚❚) button to resume normal playback.
- When playing a VCD, the reverse slow motion play will not work.

Using the Search and Skip Functions

Searching through a Chapter or Track

Press the **FWD(▶▶)** or **REW(◀◀)** SEARCH button on the remote control during playback.

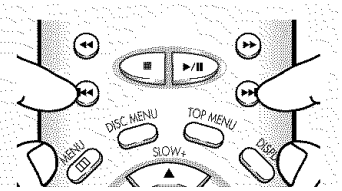


◀◀ When in search mode (2X/4X/8X/16X/32X/128X) on a DVD or high-speed playback on a VCD, no sound will be heard.

- Press the FWD(▶▶) or REW(◀◀) SEARCH button on the remote control and press again to search at a faster speed (2X/4X/8X/16X/32X/128X) on the DVD.
- Press the FWD(▶▶) or REW(◀◀) SEARCH button on the remote control and press again to search at a faster speed on VCD (4X/8X) and CD (2X/4X/8X).
- To return to normal speed playback, press the PLAY/PAUSE(▶/❚❚) button.

Skipping Tracks

During playback, press the **NEXT SKIP(▶▶❙)** or **BACK SKIP(❙◀◀)** button.



- When playing a DVD, if you press the NEXT SKIP (▶▶❙) button, it moves to next chapter. If you press the BACK SKIP (❙◀◀) button, it moves to the beginning of the chapter. One more press makes it move to the beginning of the previous chapter.
- When playing a VCD 2.0 in MENU OFF mode, a VCD1.1 or a CD, if you press the NEXT SKIP(▶▶❙) button, it moves to next track. If you press the BACK SKIP(❙◀◀) button, it moves to the the beginning of the track. One more press makes it move to the beginning of the previous track.
- If a track exceeds 15 minutes when playing a VCD and you press the NEXT SKIP(▶▶❙) button, it moves forward 5 minutes. If you press the BACK SKIP(❙◀◀) button, it moves backward 5 minutes.
- When playing a VCD 2.0 in the MENU MODE or Track View function, if you press the NEXT SKIP(▶▶❙) button, it moves to the next MENU or the next Track View display. If you press the BACK SKIP(❙◀◀)button, it moves to the previous MENU or the previous Track View display.

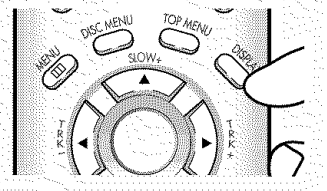
Using the Display Function

When Playing a DVD

1

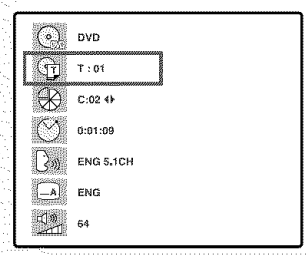
During playback, press the **DISPLAY** button.

Current title, chapter number and elapsed time will be displayed.



2

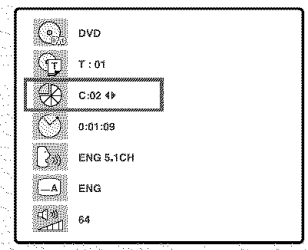
Press the UP/DOWN▲▼ buttons to select a title or a chapter number.
Press the LEFT/RIGHT ◀▶ buttons or Number buttons to enter a different title or chapter number, then press the **ENTER** button.



3

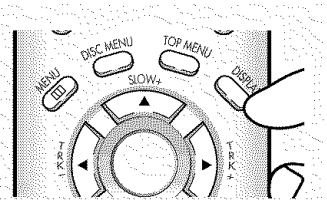
To enter the time from which you want to start, press the UP/DOWN▲▼ buttons to select, then press the Number buttons to enter the time. Then press the **ENTER** button.

Press the UP/DOWN▲▼ buttons to change the values of the current audio, subtitle and volume.



4

To make the screen disappear, press the **DISPLAY** button again.



- What is a Chapter?

  Each Title on a DVD can be divided into chapters (similar to tracks on an audio CD).

- What is a Title?

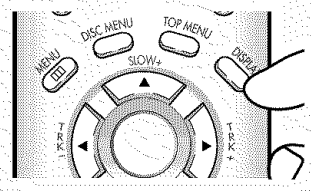
  A DVD may contain several different titles. For example, if a disc contains four different movies, each might be considered a title.

When Playing a CD/VCD

1

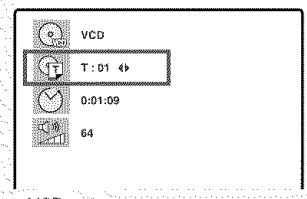
During playback, press the **DISPLAY** button.

Current track number, elapsed time and volume control will be displayed.

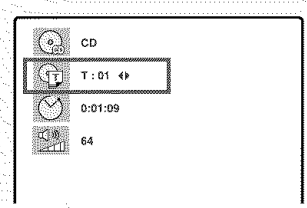


2

Press the UP/DOWN▲▼ buttons to select a track. Press the LEFT/RIGHT ◀▶ buttons or Number buttons to enter a different track number, then press the **ENTER** button.



< VCD >

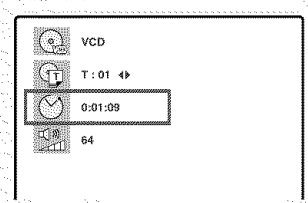


< CD >

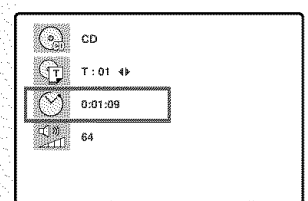
3

To enter the time from which you want to start, press the UP/DOWN▲▼ buttons to select, then press the Number buttons to enter the time. Press the **ENTER** button.

To change the value of the volume, use the LEFT/RIGHT ◀▶ buttons.



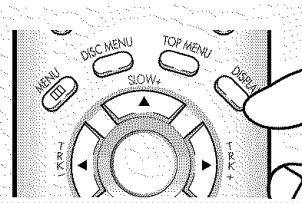
< VCD >



< CD >

4

To make the screen disappear, press the **DISPLAY** button again.

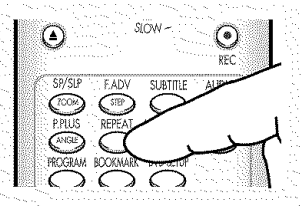


Repeat Play

Repeat the current track, chapter, title, a chosen section (A-B), or all of the disc.

1

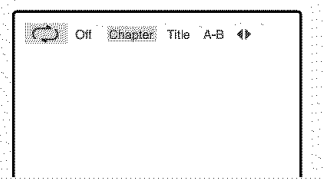
Press the **REPEAT** button.
Repeat screen appears.



2

Select Chapter, Title or A-B pressing the LEFT/RIGHT ◀▶ buttons.

Press the **ENTER** button



A-B Repeat

❶ Press the REPEAT button. Select A-B on screen with the LEFT/RIGHT◀▶ buttons.

❷ Press the ENTER button at the point where you want the repeat play to start (A).

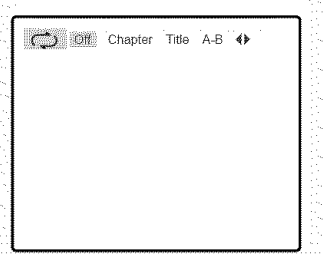
The B is automatically highlighted.

❸ Press the ENTER button at the point where you want the repeat play to stop (B).

❹ The A-B Repeat that you set plays until you turn Repeat off.

3

To return to normal playback, press the **REPEAT** button.
Press the LEFT/RIGHT◀▶ buttons to select "Off", then press the **ENTER** button.



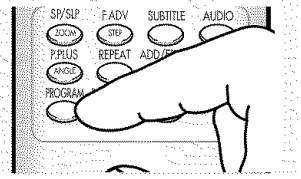
Note

- DVD repeats playback by chapter or title, CD and VCD repeat playback by disc or track.
- Depending on the disc, the Repeat function may not work.
- If the title or track is completed before marking the end (B), the end of title or track becomes B automatically.
- When in VCD 2.0 mode (Menu On mode), this function does not work.

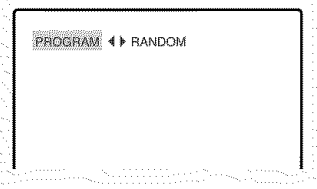
Program Play and Random Play

Program Playback

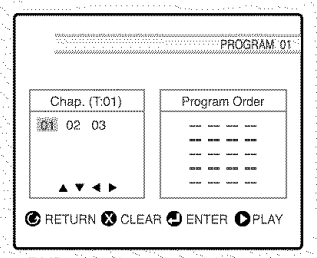
1
Press the **PROGRAM** button.



2
Press the LEFT/RIGHT ◀▶ buttons to select "PROGRAM".
Press the **ENTER** button.

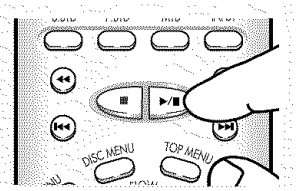


3
Press the LEFT/RIGHT ◀▶ buttons to select the first chapter (or track) to add to the program.
Press the **ENTER** button.
The selection numbers appear in the Program Order box.



< DVD >

4
Press the **PLAY/PAUSE (▶/II)** button.
The disc will be played back in programmed order.



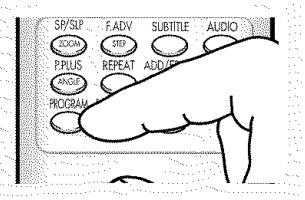
◄ Depending on the disc, the Program and Random Playback function may not work.

When in VCD 2.0 mode (Menu On mode), these functions do not work.

To resume normal playback, press the CLEAR button.

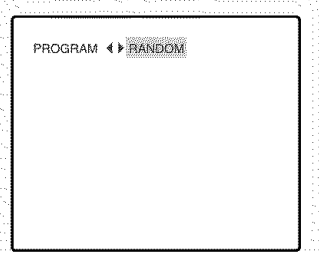
Random Playback

1
Press the **PROGRAM** button.



2
Press the LEFT/RIGHT ◀▶ buttons to select "RANDOM".
Press the **ENTER** button.

The disc will be played back in random order.

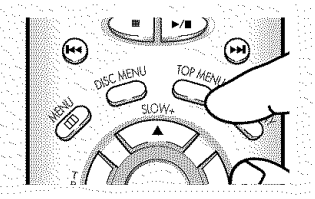


Using the Disc View Function (VCD)

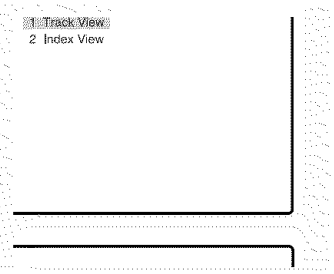
Track View/Index View

Displays the beginning view of each track and the track number (Track View).
Displays the equally divided 9 views of the current playing track (Index View).

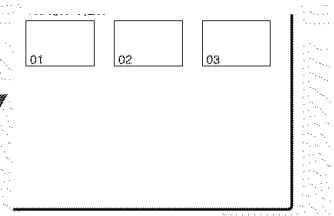
1
During playback, press the **TOP MENU** button.



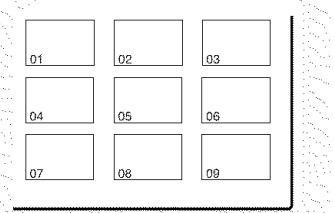
2
Press the UP/DOWN▲▼ buttons to select "Track View" or "Index View".
Press the **ENTER** button.



3
Select the desired view by pressing the UP/DOWN▲▼ or LEFT/RIGHT ◄► buttons.
Press the **ENTER** button.



< Track View >



< Index View >

◄ When pressing the TOP MENU button with a DVD; the disc's TITLE MENU function comes up. A disc must have at least two titles for the TITLE MENU function to work.

When pressing the TOP MENU button with a CD; the unit enters the INTRO mode. INTRO lets you listen to the beginning of each track for about 10 seconds.

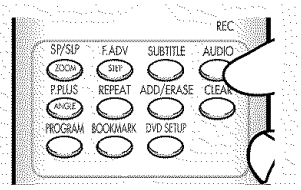
Selecting the Audio Language

Using the AUDIO Button

You can select a desired language quickly and easily with the AUDIO button.

1

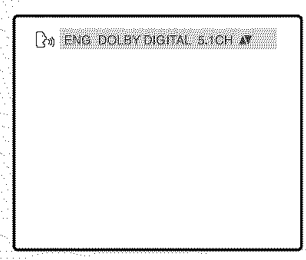
Press the **AUDIO** button.



2

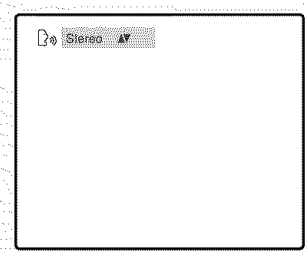
Press the UP/DOWN▲▼ buttons to select the desired language on a DVD.

The audio languages are represented by abbreviations.



3

Press the UP/DOWN▲▼ buttons to select Stereo, Right or Left (On VCD/CD).



◄ This function depends on what languages are encoded on the disc and may not work with all DVDs.

A DVD disc can contain up to 8 audio languages.

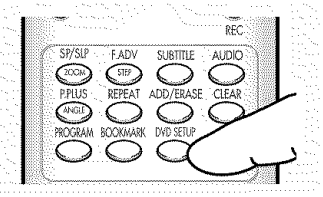
How to have the same audio language come up whenever you play back a DVD:

Refer to "Using the DVD SETUP Button (When in the DVD mode)" on page 4.10.

Using the DVD SETUP Button (When in the DVD mode)

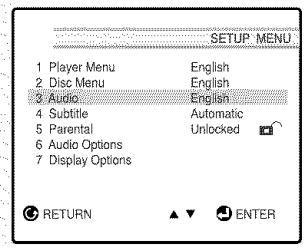
1

Press the **DVD SETUP** button.



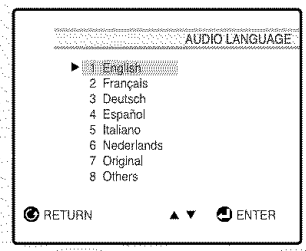
2

The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Audio".
Press the **ENTER** button.



3

Press the UP/DOWN▲▼ buttons to select appropriate language, then press the **ENTER** button.

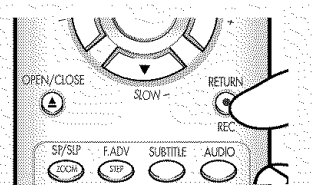


◄ Select "Original" if you want the default soundtrack language to be the original language the disc is recorded in.

If the selected language is not recorded on the disc, the original pre-recorded language is selected.

4

Press the **RETURN** button to exit.



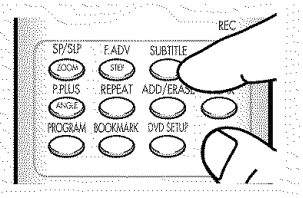
Selecting the Subtitle Language

Using the SUBTITLE button

You can select a desired subtitle quickly and easily with the SUBTITLE button.

1

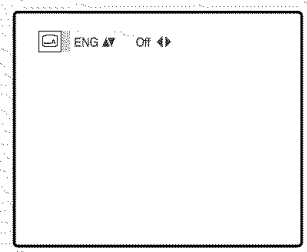
Press the **SUBTITLE** button.



2

Press the UP/DOWN▲▼ buttons to select the desired subtitle language.

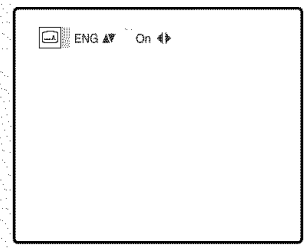
The subtitle languages are represented by abbreviations.



3

Press the LEFT/RIGHT ◀▶ buttons to determine whether or not the subtitle will be displayed.

Initially, the subtitling will not appear on screen. The subtitle languages are represented by abbreviations.



◄ This function depends on what languages are encoded on the disc and may not work with all DVDs.

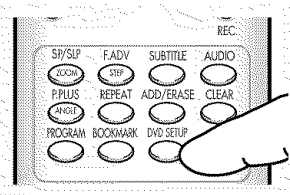
A DVD disc can contain up to 32 subtitle languages.

How to have the same subtitle language come up whenever you play back a DVD:

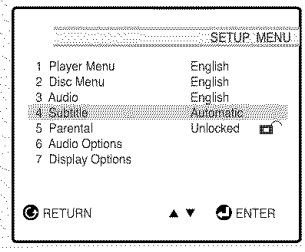
Refer to "Using the DVD SETUP Button (When in the DVD mode)" on page 4.12.

Using the DVD SETUP Button (When in the DVD mode)

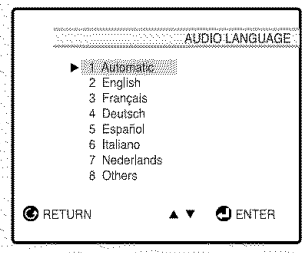
1
Press the **DVD SETUP** button.



2
The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Subtitle".
Press the **ENTER** button.



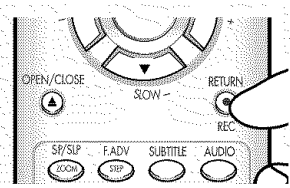
3
Press the UP/DOWN▲▼ buttons to select the appropriate language, then press the **ENTER** button.



◄ Select "Automatic" if you want the subtitle language to be the same as the language selected as the audio preference.

If the selected language is not recorded on the disc, the original pre-recorded language is selected.

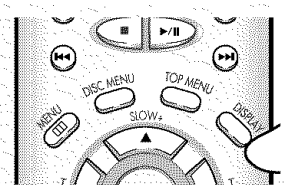
4
Press the **RETURN** button to exit.



Using the Master Volume Control Function

Press the **DISPLAY** button, then press the UP/DOWN▲▼ buttons to select master volume control.

Press the LEFT/RIGHT ◄► buttons to select a suitable volume.



- Master Volume Control function lets you adjust the volume of the player's output. This is useful for matching the player's output level to other equipment in your system.
- Volume control is only operative when using the Analog Audio outputs.
- There are up to 64 levels. Lowering each level reduces the audio level by 0.5dB.

Changing the Camera Angle

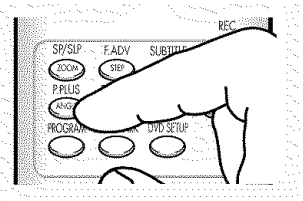
When a DVD contains multiple angles of a particular scene, you can select the Angle function.

Using the ANGLE button

Press the ANGLE button to see if an ANGLE ( ) mark is present at the upper right hand corner of the screen.

1

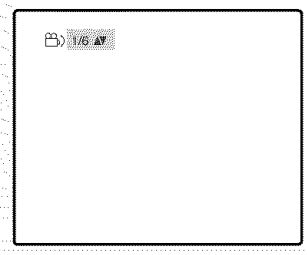
When an ANGLE mark is shown, press the **ANGLE** button, then an ANGLE select icon will appear at the upper left hand corner of the screen.



2

Press the UP/DOWN▲▼ buttons to select the desired screen angle,then press the **ENTER** button.

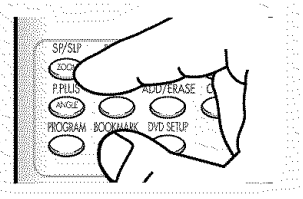
To turn off the display, press the **ANGLE** button again.



Using the Zoom Function (DVD/VCD)

1

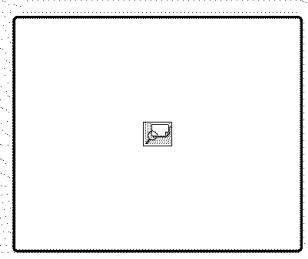
During playback or pause mode, press the **ZOOM** button on the remote. A square will be displayed on screen.



2

Press the UP/DOWN▲▼ or LEFT/RIGHT ◄► buttons to select the part of the screen you want to zoom.

Press the **ENTER** button.



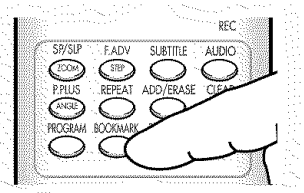
- During DVD playback, press the ENTER button to zoom in 2X/4X/2X in order.
- During VCD playback, press the ENTER button to zoom in 2X.

Using the Bookmark Function

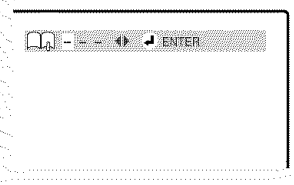
The Bookmark function lets you select parts of a DVD or VCD (MENU OFF mode) so that you can quickly find the section at a later time.

Using the Bookmark Function (DVD/VCD)

1
During playback, press the **BOOKMARK** button.
A marker will be displayed.

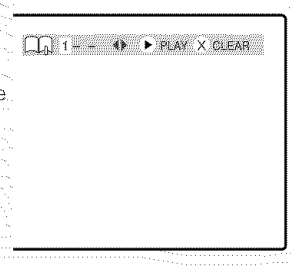


2
Press the LEFT/RIGHT ◀▶ buttons to move to the desired bookmark icon.



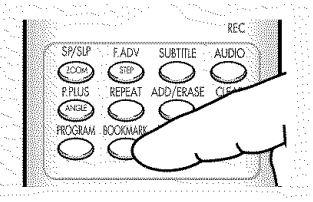
3
When you reach the scene you want to mark, press the **ENTER** button.
The icon will change to a number (1, 2, or 3).

Press the **BOOKMARK** button to turn off the display.

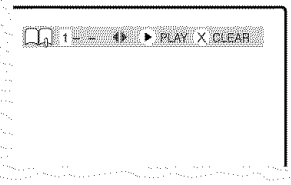


Recalling a Marked Scene

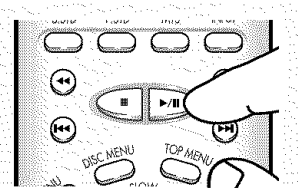
1
During playback, press the **BOOKMARK** button.
A marker will be displayed.



2
Press the LEFT/RIGHT ◀▶ buttons to select a marked scene.

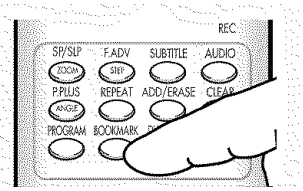


3
Press the **PLAY/PAUSE (▶/II)** button to skip to the marked scene.

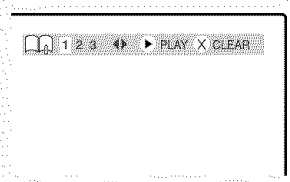


Clearing a Bookmark

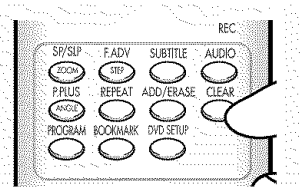
1
During playback, press the **BOOKMARK** button.
A marker will be displayed.



2
Press the LEFT/RIGHT ◀▶ buttons to select the bookmark number you want to delete.



3
Press the **CLEAR** button to delete a bookmark number.
Press the **BOOKMARK** button to turn off display.



- Up to three scenes may be marked at the same time.
- When in VCD 2.0 mode (Menu On mode), this function does not work.
- Depending on the disc, the Bookmark function may not work.

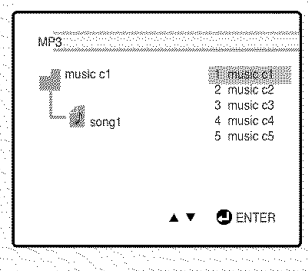
MP3 Play

When an MP3 Disc is inserted into the DVD player, the first song file of the first folder plays.

MP3 Play Function

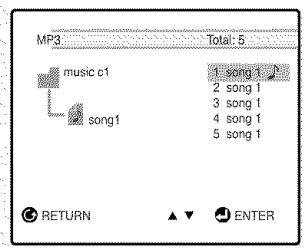
1

Press **STOP** to stop playback of the first song file, then press **RETURN** to display the music folder menu on the right side of the screen. Up to 8 music folders can be displayed at a time. If you have more than 8 folders on a disc, press the LEFT/RIGHT ◄► buttons to bring them up on the screen.



2

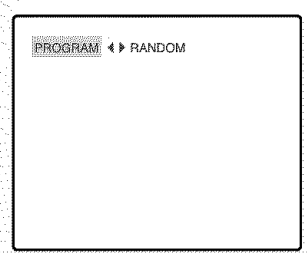
Press the UP/DOWN▲▼ buttons to select the desired music folder, then press ENTER. Press the UP/DOWN▲▼ buttons again to select a song file. Press ENTER to begin playback of the song file.



Program/Random playback

1

Press the **PROGRAM** button to switch between the RANDOM and PROGRAM modes. See page 4.7 for more information on these modes.



Notes:

- A musical note is displayed next to the file currently playing.
- Press the REPEAT button to hear only music continuously and press it once again to release.

CD-R MP3 discs

In the case of CD-R MP3 discs, please follow all the recommendations for CD-R above, plus the comments below:

- **Your MP3 files should be ISO 9660 or JOLIET format.**
  ISO 9660 format and Joliet MP3 files are compatible with Microsoft's DOS and Windows, and with Apple's Mac. These two formats are the most widely used.

- **When naming your MP3 files do not exceed 8 characters, and place ".mp3" as the file extension.**
  General name format of: Title.mp3. When composing your title, make sure that you use 8 characters or less, have no spaces in the name, and avoid the use of special characters including: (.,/,\,=,+).

- **Use a decompression transfer rate of at least 128 kb/sec (kilobytes/second) when recording MP3 files.**
  Sound quality with MP3 files basically depends on the rate of compression/decompression you choose. Getting audio CD quality sound requires an analog/digital sampling rate, that is conversion to MP3 format, of at least 128 kb/sec and up to 160 kb/sec. However, choosing higher rates, like 192 kb/sec or more, only rarely give better sound quality. Conversely, files with sampling rates below 128 kb/sec will not be played properly.

- **Do not try recording copyright protected MP3 files.**
  Certain "securized" files are encrypted and code protected to prevent illegal copying. These files are of the following types: Windows Media™ (registered trade mark of Microsoft Inc) and SDMI™ (registered trade mark of The SDMI Foundation). You cannot copy such files.

- **Your DVD player only accepts one level of file directory.**
  Consequently you must choose:
  - either to save all your MP3 recording files at the root of the disc;
  - and/or create folders in the directory for each artist or music type (e.g.classical, rock, jazz, etc)

- **Important:**
  The above recommendations cannot be taken as a guarantee that the DVD player will play MP3 recordings, or as an assurance of sound quality. You should note that certain technologies and methods for MP3 file recording on CD-Rs prevent optimal playback of these files on your DVD player (degraded sound quality and in some cases, inability of the player to read the files).

Setting up the Language Features

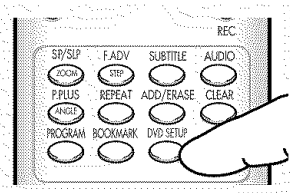
If you set the player menu, disc menu, audio and subtitle language in advance, it will come up automatically every time you watch a movie.

Using the Player Menu

Use the Player preference menu to select the language for the player's on-screen displays.

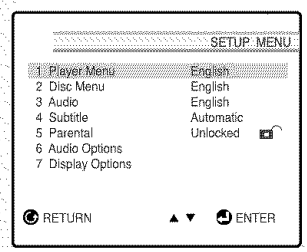
1

Press the **DVD SETUP** button.



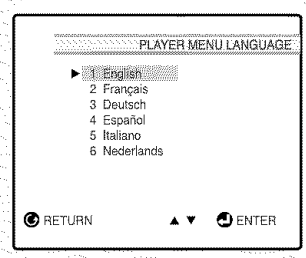
2

The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Player Menu". Press the **ENTER** button.



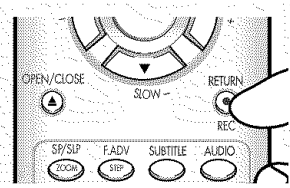
3

Press the UP/DOWN▲▼ buttons to select the appropriate language, then press the **ENTER** button.



4

Press the **RETURN** button to exit.

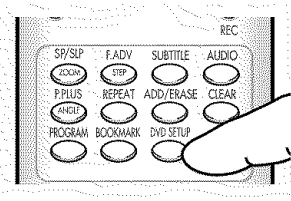


Using the Disc Menu Language

Use the Menu preference menu to select the language you want a DVD's disc menu to be displayed in.

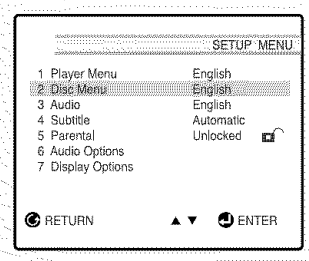
1

Press the **DVD SETUP** button.



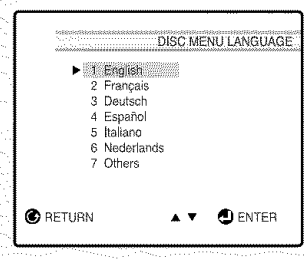
2

The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Disc Menu". Press the **ENTER** button.



3

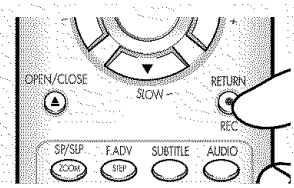
Press the UP/DOWN▲▼ buttons to select the appropriate language, then press the **ENTER** button.



◄ If the selected language is not recorded on the disc, the original pre-recorded language is selected.

4

Press the **RETURN** button to exit.

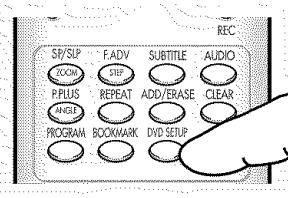


Setting up the Parental Control

The Parental Control function works in conjunction with DVDs that have been assigned a rating - which helps you control the types of DVDs that your family watches. There are up to 8 rating levels on a disc.

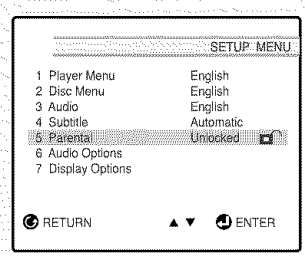
1

Press the **DVD SETUP** button.



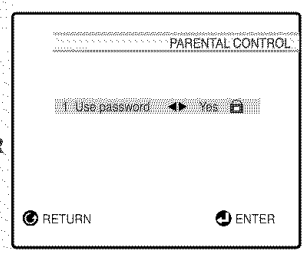
2

The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Parental". Press the **ENTER** button.



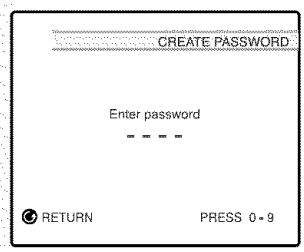
3

Press the LEFT/RIGHT ◀▶ buttons to select "Yes" if you want to use a password, then press the **ENTER** button.
The Enter Password screen appears.



4

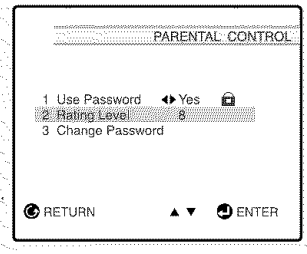
Enter your password.
The Re-enter Password screen appears to confirm the password.
Enter you password again.
The Parental Control screen appears.

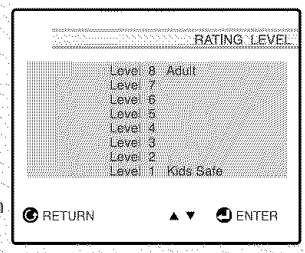


5

About the Rating Level;
The Rating Level will work only when use password is set to " Yes" . To unlock the player, press LEFT/RIGHT ◀▶ buttons to select " No" .

❶Press the UP/DOWN ▲▼ buttons to select the " Rating Level" , then press the **ENTER** button.
❷Press the UP/DOWN ▲▼ buttons to select the Level(e.g. Level 8), then press the **ENTER** button. Disc that contain Level 7 will now not play.

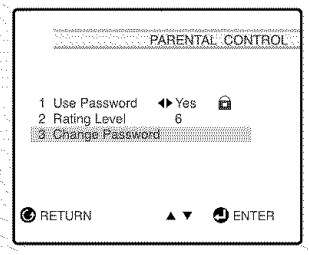


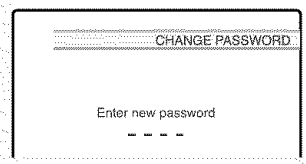


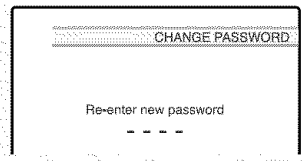
To cancel the rating level, press the LEFT/RIGHT ◀▶ buttons button to select No in Use Password.

6

About Change Password;
❶Press the UP/DOWN▲▼ buttons to select " Change Password" . The Change Password screen appears.
❷Enter your new password. Re-enter the new password again.

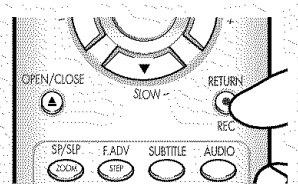






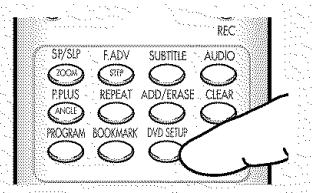
7

Press the **RETURN** button to exit.

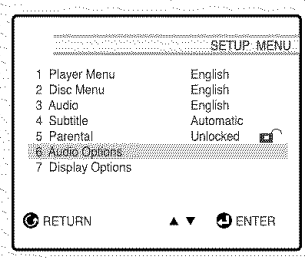


Setting up the Audio Options

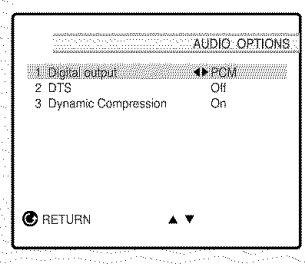
1
Press the **DVD SETUP** button.



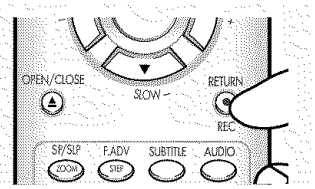
2
The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Audio Options". Press the **ENTER** button.



3
Press the UP/DOWN▲▼ buttons to select the desired item, then press the LEFT/RIGHT ◀▶ buttons.



4
Press the **RETURN** button to exit.



• Digital output
PCM: Converts to PCM(2CH) 48kHz/16Bit audio. Select PCM when using the Analog Audio Outputs.
Bitstream: Converts to Dolby Digital BITSTREAM - 5.1CH (if MPEG-2, 7.1CH). Select BITSTREAM when using the Digital Audio Output.

• DTS
On : Outputs DTS BITSTREAM via digital output only. Select DTS when connecting to a DTS DECODER.
Off : Doesn't output digital signal.

• Dynamic Compression
On : To select dynamic compression.
Off : To select the standard range.

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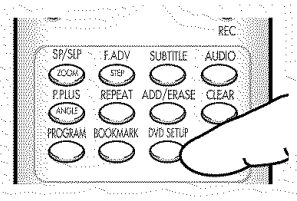
"DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

Setting up the Display Options

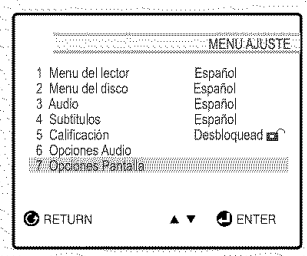
1

Press the **DVD SETUP** button.



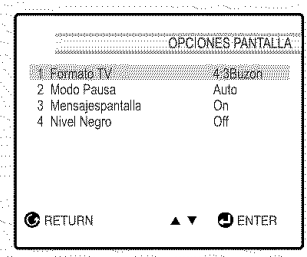
2

The SETUP MENU is displayed.
Press the UP/DOWN▲▼ buttons to select "Display Options". Press the **ENTER** button.



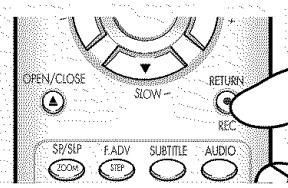
3

Press the UP/DOWN▲▼ buttons to select the desired item, then press the LEFT/RIGHT ◄► buttons.



4

Press the **RETURN** button to exit.



• TV Aspect

4:3 Letter Box : Select when you want to see the total 16:9 ratio screen DVD supplies, even though you have a TV with a 4:3 ratio screen. Black bars will appear at the top and bottom of the screen.

4:3 Pan Scan : Select this for conventional size TVs when you want to see the central portion of the 16:9 screen. (Extreme left and right side of movie picture will be cut off.)

16:9 Wide : You can view the full 16:9 picture on your widescreen TV.

• Still Mode

Field : Select this feature when the screen shakes in the Auto mode.

Frame : Select this feature when you want to see small letters more clearly in the Auto mode.

Auto : When selecting Auto, Field/Frame mode will be automatically converted.

• Screen Messages

Use to turn on-screen messages on or off.

• Black Level

Adjusts the brightness of the screen.(On/Off)

Chapter Five

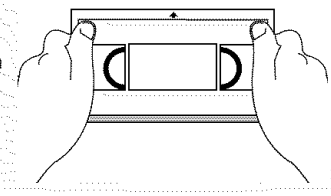
VCR Operation

In this chapter, you will learn how to play a video cassette tape, how to use the time counter and memory stop features, and how to record a program as you are watching TV.

Inserting and Ejecting a Video Cassette Tape

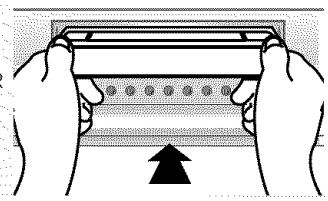
To insert a video cassette tape,

1 Hold the video cassette tape window-side up with the arrow pointing away from you.



2 Gently push the tape through the compartment door until you feel the VCR pull it.

The VCR loads the tape automatically.



◄ Don't try to insert a tape upside down or backwards.

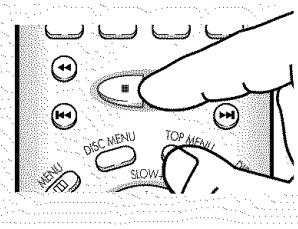
Use only video tapes labeled "VHS." European PAL VHS video tapes and S-VHS pre-recorded tapes aren't compatible with this unit. Choose brand name, high quality tapes for best results.

◄ If the power is off when you insert a tape, the TV turns on automatically.

If the safety tab of your video tape has been removed, the tape begins to play automatically. You don't have to press PLAY. For more information on the safety tab, see page A.3.

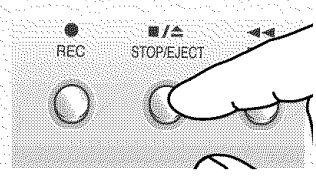
To eject a video cassette tape,

1 Press the **STOP(■)** button to stop playing the tape.



◄ When you're finished playing a pre-recorded video tape, it's best to rewind it to the beginning and remove it from the VCR to protect it from wear and tear.

2 Press the **STOP/EJECT** button on the front control to eject the tape.

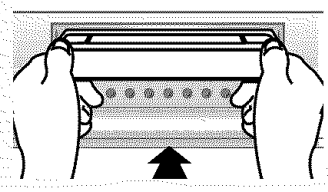


◄ After ejecting a tape, you should remove it completely from the compartment and turn off the VCR.

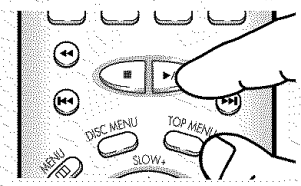
Playing a Pre-Recorded Video Cassette Tape

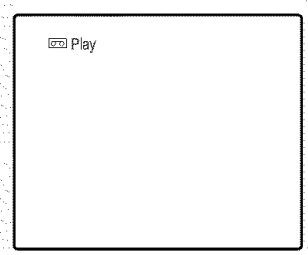
Playing the Tape

1
Insert the video cassette tape.



2
If the tape doesn't begin to play automatically, press the **PLAY/PAUSE (▶/II)** button.



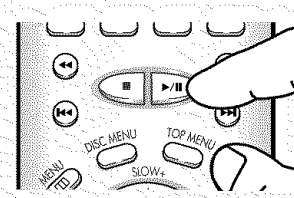


◄ For information on inserting a video tape, see page 5.1.

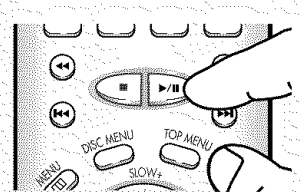
Pausing

1
While a tape is playing, press the **PLAY/PAUSE (▶/II)** button when you want to interrupt play.

The tape pauses temporarily.



2
Press the **PLAY/PAUSE (▶/II)** button to resume playing the tape.



◄ The VCR does not play sound while a video tape is paused.

See "Using Automatic Tracking" on the next page.

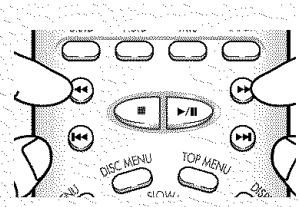
If the tape is still paused after five minutes, the TV/VCR automatically play the tape and switches to the TV mode to protect the video heads from excessive wear.

Using Picture Search

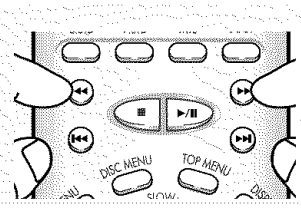
Picture search lets you quickly search a pre-recorded video tape for a particular scene.

1
While playing a tape, press and release the **FWD(▶▶)** or **REW(◀◀)** button.

The images from the tape are displayed on the screen at a high speed.



2
When you find the scene you want, press and release the **FWD(▶▶)** or **REW(◀◀)** button again to resume playing the tape at regular speed.



◄ For information on inserting and playing a tape, see pages 5.1 and 5.2.

There's no sound while you search for a picture at high speeds.

There may be some horizontal streaks on the screen while you search.

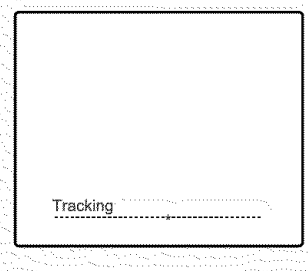
This technique is good if you're searching through only a small amount of tape. If you want to search through a large amount of tape, stop the tape before pressing FF or REW.

Using Automatic Tracking

Automatic tracking adjusts a video tape's tracking automatically in just a few seconds.

1
Insert and play a video cassette tape.

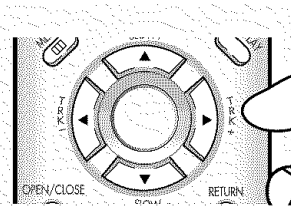
As soon as the tape begins to play, the VCR begins automatic tracking.



◄ For information on inserting and playing a tape, see pages 5.1 and 5.2.

The tracking display will appear the first time a tape is played after being placed in the VCR, when there is a change in tape speed, or when you press the TRK buttons.

2
If automatic tracking doesn't remove the streaks from the picture, press and hold the **TRK +** or **TRK -** button until the streaks disappear.



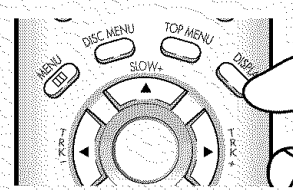
◄ These two buttons can also be used to do vertical lock control.

Vertical Lock Control
To reduce vertical jitter of the image in STD.L mode.

Using the Time Counter

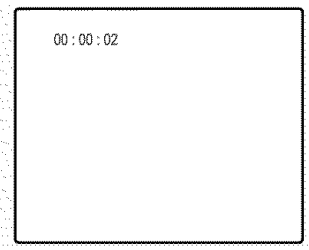
The time counter allows you to keep track of how much time (in hours, minutes, and seconds) has elapsed on the video tape you're watching. The counter can also be useful if you want to find a specific point on a pre-recorded tape.

1 While a tape is playing, press the **DISPLAY** button twice.



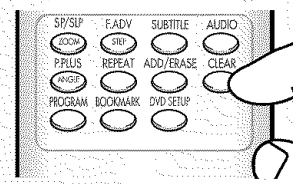
◄ For information on inserting and playing tapes, see pages 5.1 and 5.2.

2 The time counter appears in the upper left corner of the screen.



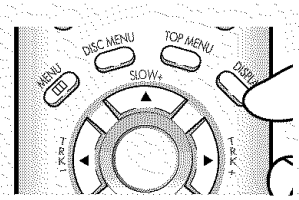
◄ The counter displays time only for recorded sections of tape. Blank tapes or blank sections of tapes do not affect the counter display.

3 Press the **CLEAR** button to set the counter to "00:00:00."



◄ The VCR automatically resets the counter to "00:00:00" when you eject a tape.

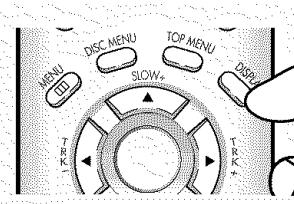
4 Press the **DISPLAY** button twice again to remove the time counter from the screen.



Using Memory Stop

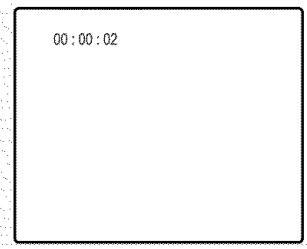
Memory stop makes it easy for you to find a particular scene in a video tape. The VCR automatically stops rewinding or fast forwarding when the memory counter is at "00:00:00," so you simply need to mark the desired scene as "00:00:00." Then, you'll be able to search for that place the next time you watch the tape.

1 While playing a tape, when you reach the scene you want, press the **DISPLAY** button twice.

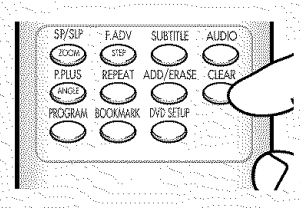


◄ For information on inserting and playing a tape, see pages 5.1 and 5.2.

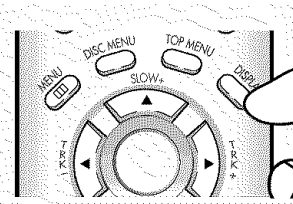
2 The time counter appears in the upper left corner of the screen.



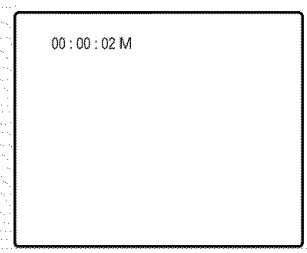
3 Press the **CLEAR** button to reset the timer to "00:00:00."



4 Press **DISPLAY** again to enter the scene into memory.



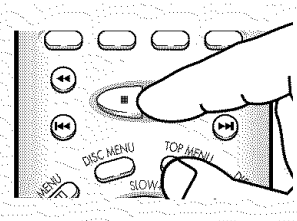
5 The letter "M" appears beside the time counter.



◄ If you want to remove the time counter memory from the screen and cancel the memory stop feature, just press the DISPLAY button again.

To return to the scene you marked,

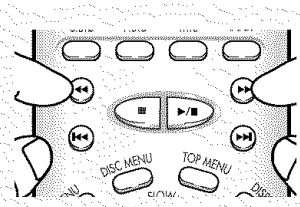
1
Press the **STOP(■)** button.



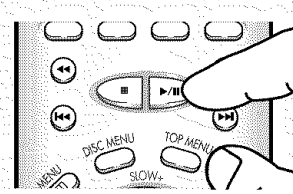
◄ For this feature to work, the time counter and the letter "M" must still be on the screen. If this isn't the case, press the DISPLAY button until the time counter and the letter "M" are both on the screen.

2
Press the **FWD(▶▶)** or **REW(◀◀)** button to return to the scene you marked.

The VCR stops the tape when the counter reaches "00:00:00M."



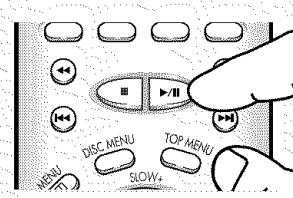
3
Press the **PLAY/PAUSE (▶/II)** button.
to view the scene again.



Using P.PLUS

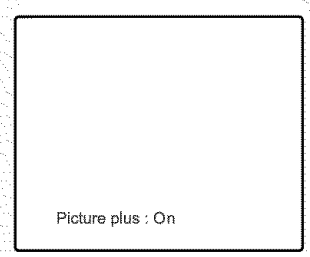
Press P.PLUS to compensate for a poor rental tape.

1
Insert a tape and press the **PLAY/PAUSE (▶/II)** button.



2
Press the **P.PLUS** button, and "Picture plus Off" appears on the screen.

Press the **P.PLUS** button again to turn to "Picture plus On". The Picture Plus functions only when a tape is being played.

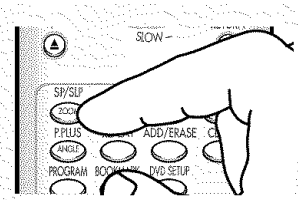


◄ If the tape is ejected and reinserted, the Picture Plus feature will be Off.

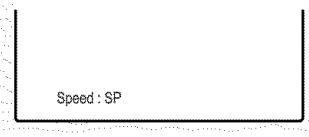
Recording TV Programs As You Watch

Recording

1 With your VCR turned on, and with a tape in the unit, press the **SP/SLP** button.



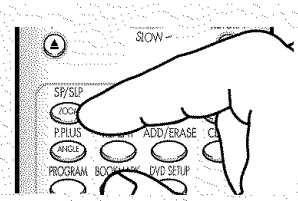
The tape speed appears in the the screen.



◄ For information on inserting a video tape, see page 5.1.

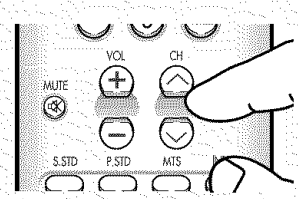
Be sure the record safety tab is in place. For information on the record safety tab, see page A.2.

2 Press the **SP/SLP** button repeatedly until the speed you want (SLP or SP) appears.



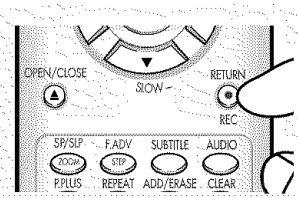
◄ SP (Standard Play) is the most common speed for recording. For more information on tape speeds, see page A.2.

3 Select the TV channel you want by pressing the **CH** ▲ or **CH** ▼ button or by using the number buttons.



◄ If you are using the number buttons to select the channel, press 0 before a single-digit channel number. For example, to select channel 5, press 0, 5.

4 Press the **REC** button. The record indicator on the control panel illuminates and the VCR begins recording.



Notes:

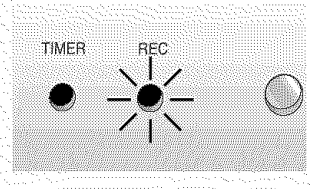
- The VCR automatically stops recording and rewinds when it reaches the end of the tape.
- Press the STOP button at any time to stop recording.
- We don't recommend changing tape speeds while a recording is in progress. Doing so may cause distortion of the picture during playback.
- When you're finished recording, rewind the tape to the beginning and remove it from the VCR to protect the tape.
- When pressing the REC button on the front panel during DVD playback, the DVD will be recorded on the VCR tape. If your DVD title has been equipped with a Copy Protect technology, it can't be recorded on the VCR tape.
- You can play a DVD by switching into the DVD mode during channel recording.
- You can't play a DVD by switching into DVD mode during A/V recording.
- Mode Switching doesn't operate during recording in DVD mode.

Editing While Recording

You can edit while recording, selecting only those scenes you want to record from the current television program. This is especially helpful if you want to record a program without the commercials.

1

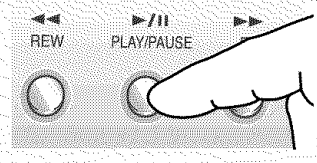
Be sure you have begun recording and that the record indicator light on the front panel is illuminated.



◄ For information on recording, see page 5.6.

2

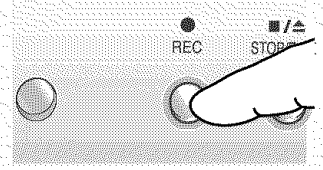
Press the **PLAY/PAUSE (►/II)** button on the front panel to temporarily stop recording.



◄ After ten minutes in the pause mode, the VCR automatically stops the tape and switches to TV mode to protect the video heads from excessive wear. If this happens, press REC to resume recording.

3

To resume recording, press the **REC** button on the front panel or remote control again.

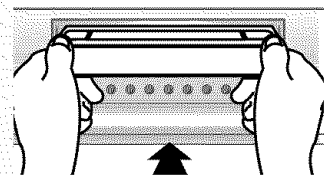


Using Advanced Recording Features

Using One-Touch Recording

One-touch recording (OTR) lets you record television programs with the touch of a button. You can even program the length of time (up to four hours) that you want to record.

1
Insert a video cassette tape, set the tape speed, and select the channel you want to record.

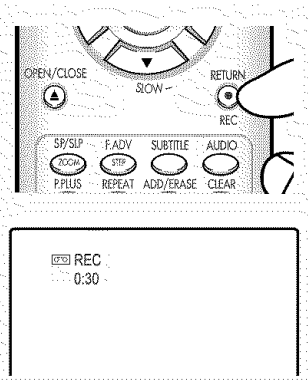


◄ For information, see "Recording Programs As You Watch" on page 5.7

The VCR won't record on a video cassette tape if the record safety tab on the tape has been removed. For information on the record safety tab, see page A.3.

2
Press the **REC** button repeatedly until the time you want appears.

The VCR begins recording.



Your recording time options are: 30 minutes, 1 hour, 1 hour and 30 minutes, 2 hours, 3 hours, or 4 hours.

You can increase the length of time you want to record at any time during the recording process by pressing the REC button again and choosing additional time.

If you want to stop recording before the time is up, press the REC button until the OTR display shows "0:00." The recording stops after a few seconds. Or, press the POWER button on the front panel, then immediately press the STOP/EJECT button.

Note: In DVD mode, the OTR function doesn't operate with the REC button on the front panel. A normal recording only operates.

Recording at a Later Time

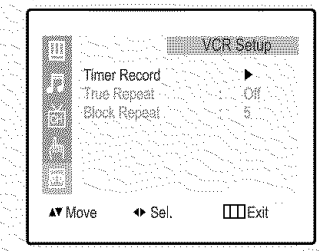
You can set the built-in timer for unattended recording of up to eight different TV programs. The timer can turn on the TV at the time you select, record for a selected length of time, and then turn off the TV – all without you being there.

You can also choose to record a program one time, daily (every day, Monday through Friday), or weekly (the same day every week.)

1

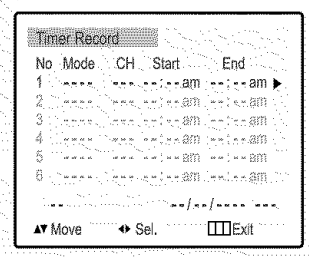
Press the **MENU** button.

Press the UP/DOWN▲▼ button to select "VCR Setup", then press the LEFT/RIGHT ◄► button.



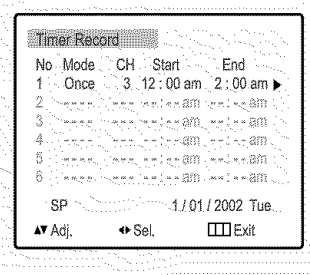
2

Press the UP/DOWN▲▼ button to select "Timer Record", then press the LEFT/RIGHT ◄► button.



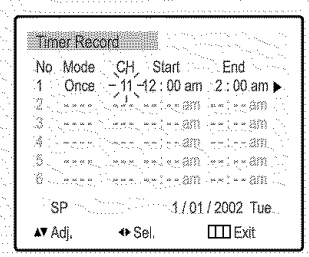
3

Press the RIGHT ▶ button, then press the UP/DOWN▲▼ buttons to select "Once", "Wkly", or "Daly".



4

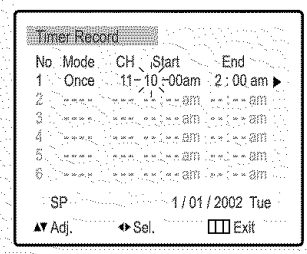
Press the RIGHT ▶ buttons, then press the UP/DOWN▲▼ buttons to select the channel you want to record.



◄ The clock must be set to the correct time and date before you program the timer. For more information on setting the clock, see page 3.18 and 3.19.

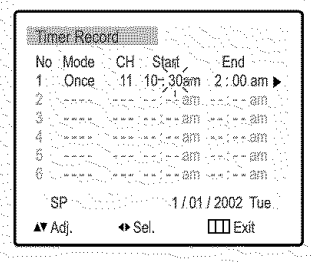
5

Press the RIGHT ▶ button. The Starting hour will select.
Press the UP/DOWN▲▼ buttons to select the hour when you want to begin recording.



6

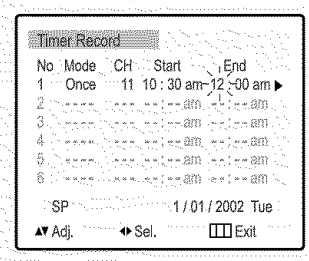
Press the RIGHT ▶ button, then press the UP/DOWN▲▼ buttons to select the minute when you want to begin recording.



◄ The VCR automatically selects am or pm for the starting time.

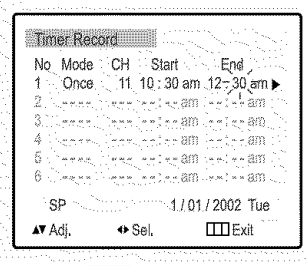
7

Press the RIGHT ▶ button. The ending hour will select.
Press the UP/DOWN▲▼ buttons to select the hour when you want to begin recording.



8

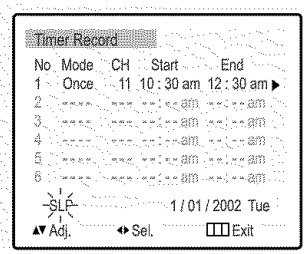
Press the RIGHT ▶ button, then press the UP/DOWN▲▼ buttons to select the minute when you want to begin recording.



◄ The VCR automatically selects am or pm for the ending time.

9

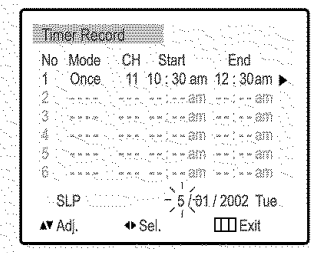
Press the RIGHT ▶ button. The recording speed will select.
Press the UP/DOWN▲▼ buttons to select speed at which you want to record.



◄ For more information on selecting tape speeds, see pages 5.6, 5.7, and A.2.

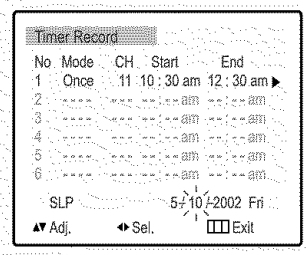
10

Press the RIGHT ▶ button. The month will select. Press the UP/DOWN▲▼ buttons to select the month when you want to begin recording.



11

Press the RIGHT ▶ button, then press the UP/DOWN▲▼ buttons to select the day when you want to begin recording.

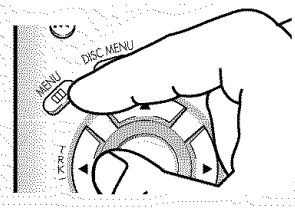


◄ If you enter two program times that overlap, a program overlap warning appears on the TV screen, along with instructions for fixing the overlap.

The REC indicator on the front panel of the VCR is lit when program times are stored.

12

Press the **MENU** button to exit the menu system and return to normal viewing.



◄ To enter additional program recording times, repeat steps 1-11.

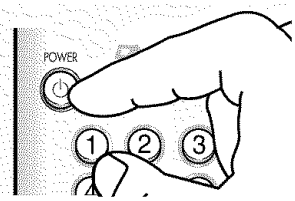
If you enter two program times that overlap, a program overlap warning appears on the TV screen, along with instructions for fixing the overlap.

The timer indicator on the front panel of the TV illuminates when program times have been stored.

The TV should be turned off to record the programs you've chosen.

13

Press the **POWER** button to turn off the VCR.



IMPORTANT:

- The TV should be off to record the programs you've chosen. But, if you are recording a channel that comes through a cable box, be sure to leave the cable box turned on and tuned to the channel you want to record.
- When a timer recording is in progress, there is no picture on the monitor because the power is off. If you want to watch the channel while it's being recorded, press POWER **on the remote control only**.
- One-time timer programs clear from memory automatically when the recording is finished. Daily and weekly programs remain in the timer until you remove them. If power to the TV is interrupted,timer program will be removed from memory. The clock and calendar, however, must be reset.

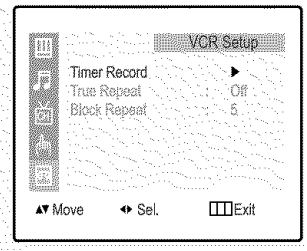
Using True Repeat

You can set your VCR to automatically repeat a tape or a section of tape. When you use True Repeat, your VCR will play until it reaches the end of a tape. Then, it will rewind to the beginning of the tape and begin playing again.

1

Press the **MENU** button.

Press the UP/DOWN▲▼ button to select "VCR Setup", then press the LEFT/RIGHT ◄► button.

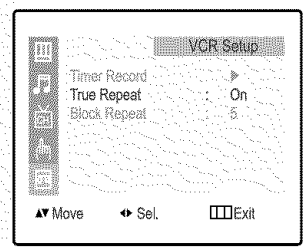


◄ For information on viewing the main menu, see page 3.1. For information on viewing the VCR setup menu, see page 5.10.

2

Press the UP/DOWN▲▼ button to select "Ture Repeat", then press the LEFT/RIGHT ◄► button to select "On".

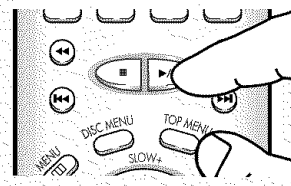
Press **MENU** to return to normal viewing.



3

Insert and play a pre-recorded video cassette tape.

The VCR will play the tape until it reaches a the end of the tape. Then, the VCR will stop the tape, rewind it to the beginning, and begin playing again.

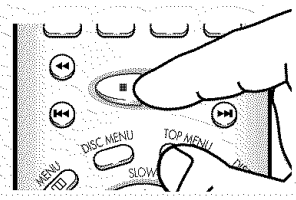


◄ For information on inserting and playing a tape, see pages 5.1 and 5.2.

If the VCR reaches an unrecorded section of tape before it reaches the end, it will search forward and check the tape again. If it finds a recorded section of tape, it will begin playing. If the tape is still blank, it will continue to search forward, until it reaches the end of the tape.

4

Press the **STOP** button to end the repeat.



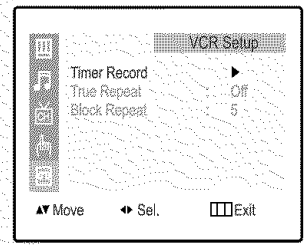
Using Block Repeat

Block repeat allows you to repeat a section of tape that you select. You can repeat this section of tape (the "block") from one to ten times, or endlessly.

1

Press the **MENU** button.

Press the UP/DOWN▲▼ button to select "VCR Setup", then press the LEFT/RIGHT ◀▶ button.

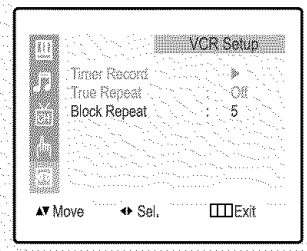


◀ For information on viewing the menu, see page 3.1. For information on viewing the VCR setup menu, see page 5.10.

2

Press the UP/DOWN▲▼ button to select "Block Repeat", then press the LEFT/RIGHT ◀▶ button to select the number of times you want your "block" to repeat.

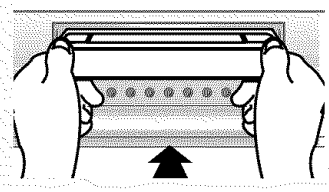
Press the **MENU** button to return to normal viewing.



You can choose to have your "block" repeat from one to ten times, or endlessly.

3

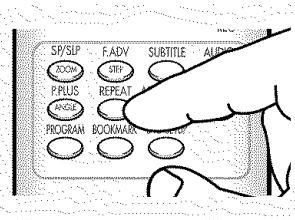
Insert and play a pre-recorded video cassette tape.



◀ For information on inserting and playing a tape, see pages 5.1 and 5.2.

4

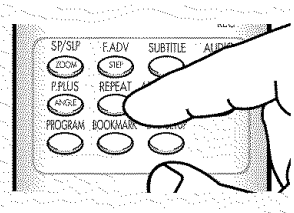
Press the **REPEAT** button at the beginning of the "block" you want to repeat.



◀ "Repeat" section should be set up at a minimum ten-second interval.

5

When you reach the end of the "block," press the **REPEAT** button again.



◀ The word "Repeat" will appear on the screen.

To stop block repeat, press the STOP, or POWER buttons. You can also cancel block repeat by fast forwarding or rewinding to a point outside the "block."

The VCR will rewind the tape to beginning of the block and repeat it.
The VCR will repeat the block as many times as the number you set in step 1.

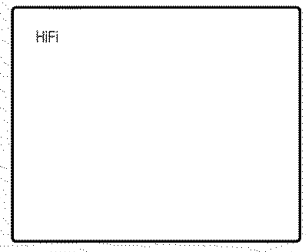
Using the HiFi Stereo

You can record or listen to a program in HiFi stereo.

Selecting the HiFi Mode

1

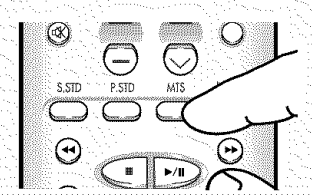
Insert the video cassette tape.
If the tape doesn't begin to play automatically, press the **PLAY/PAUSE (▶/II)** button.



◄ HiFi: High Fiedlity which produces better sound than standard stereo VCR.

2

Press the MTS button repeatedly to select "Mono," "Stereo", "L" or "R".



MTS Recording / Monitor Mode

Type of broad	Display on the TV screen	Stereo/SAP Selection	Hi-Fi audio tack (2-channel)		Normal audio track
			L-channel	R-channel	
Regular (Normal audio)	None	Invalid	Mono	Mono	Mono
Stereo broadcast	Stereo	Invalid	L	R	L+R
Bilingual broadcast	SAP	Stereo	Main audio program	Main audio program	Main audio program
		SAP	Sub audio program	Sub audio program	Sub audio progrma
Stereo & Bilingual broadcast	Stereo SAP	Stereo	L	R	L+R
		SAP	Sub audio program	Sub audio program	Sub audio program

Video Dubbing

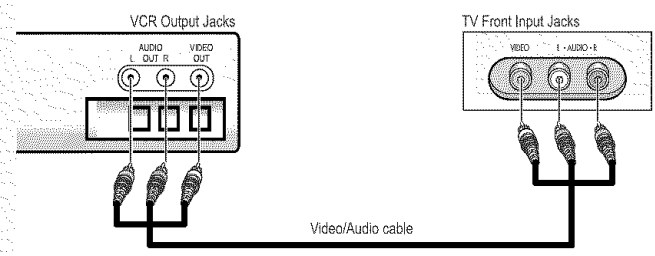
You can make a copy of another video cassette tape. This is called "dubbing." To dub, you need:

- your VCR,
- a separate VCR (or camcorder), and
- two A/V cables with connectors. (You can find these at most electronics supply stores.)

We recommend that you play the pre-recorded tape in the separate VCR (or camcorder) and record on your TV.

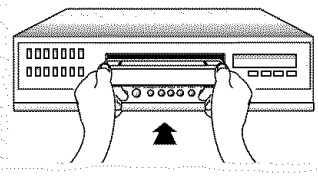
Making the Connections

Attach one end of the first cable to the VIDEO/AUDIO OUT connector of the playback VCR (or camcorder) and the other end to the VIDEO/AUDIO IN connector of the TV.



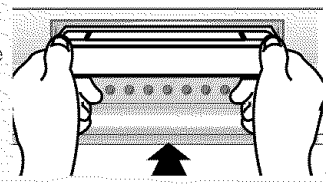
Video Dubbing

1
Insert the video cassette tape you want to copy into the playback VCR (or camcorder).

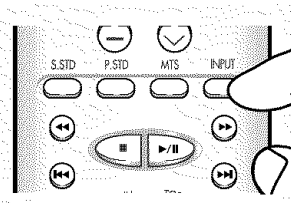


◄ Important Warning: One Federal Court has held that unauthorized recording of copyrighted TV programs may be an infringement of copyright laws.

2
Insert a blank video tape (or any video tape with the record safety tab intact) into the recording VCR.



3
Press the **INPUT** button on the remote control of the recording VCR.



◄ TheVCR will be recording from the incoming line rather than from the normal broadcast signal.

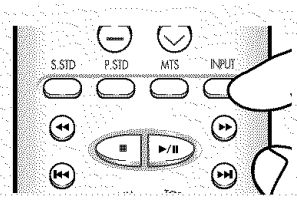
"AV" will remain on-screen until the PLAY button is pressed on the playback VCR.

The words "AV" appear in the upper left corner of the TV screen.

4
To begin recording, simultaneously press the **REC** button on the recording TV's remote control and the **PLAY/PAUSE (▶/II)** button. on the playback VCR (or camcorder).

5
When you are finished, press the **STOP(■)** button on both the VCR (or camcorder) and the TV to stop recording.

6
Press the **INPUT** button to return to normal TV viewing.



Using Special Playback Features

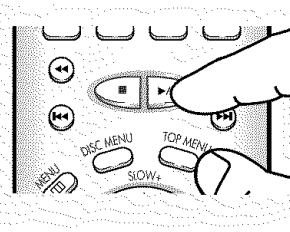
Your VCR provides you with special features that are available when you are playing a tape. These features are Frame Advance, and Slow Motion.

Frame Advance

Frame Advance allows you to watch a tape frame-by-frame.

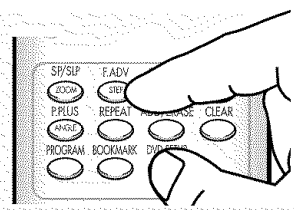
1

While a tape is playing, press the **PLAY/PAUSE (▶/II)** button on the remote.
If the picture jitters, press the **TRK +,-** button.



2

Press the **F.ADV** button repeatedly to move forward frame-by-frame. Do not hold the button down.
Press the **PLAY/PAUSE (▶/II)** button to resume normal playback.

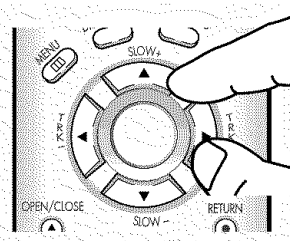


Slow motion

You can watch a tape at various slow-motion speeds.

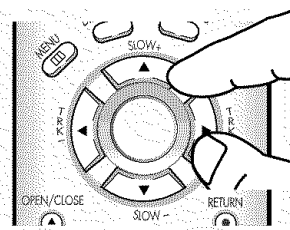
1

While a tape is playing, press the **SLOW +** or **SLOW -** button on the remote.
If the picture is jittery or shows noise, try using the **TRK** buttons to clear the picture.



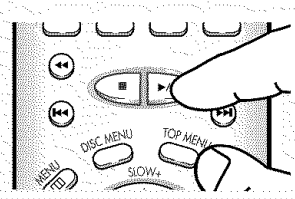
2

Press the **SLOW +** or **SLOW -** button to adjust the slow motion speed between 1/5 and 1/60 normal speed.



3

Press the **PLAY/PAUSE (▶/II)** button to resume normal play.
There is no sound during slow motion.



◄ It is normal to occasionally see some streaks or jitter during slow motion play.

If slow motion continues for more than five minutes, the VCR may play automatically to protect the tape and video heads.

Chapter Six

TROUBLESHOOTING

If the TV seems to have a problem, first try this list of possible problems and solutions. If none of these troubleshooting tips apply, then call your nearest service center.

Identifying TV Problems

Problem	Possible Solution
Poor picture	Try another channel. Adjust the antenna. Check all wire connections.
Poor sound quality	Try another channel. Adjust the antenna.
No picture or sound	Try another channel. Press the TV/VIDEO button. Make sure the TV is plugged in. Check the antenna connections.
No color, wrong colors or tints.	Make sure the program is broadcast in color. Adjust the picture settings. If the set is moved or turned in a different direction, the power should be OFF for at least 30 minutes.
Picture rolls vertically.	Adjust the antenna. Check all wire connections.
The TV operates erratically	Unplug the TV for 30 seconds, then try operating it again.
The TV won't turn on.	Make sure the wall outlet is working.
Disc does not play.	Ensure that the disc is installed with the label side facing up. Check the region number of the DVD. This player cannot play CD-ROMs, DVD-ROMs, CD-R, etc. Insert a DVD, a VIDEO-CD or a CD.
5.1 channel sound is not being reproduced.	5.1 channel sound is reproduced only when the following conditions are met. : 1) The DVD player is connected with the proper amplifier. 2) The disc is recorded with 5.1 channel sound. • Check whether the disc being played has the "Dolby 5.1 ch" mark on the outside. • Check if your audio system is connected and working properly.

Identifying DVD Problems

Problem	Possible Solution
Disc does not play.	Ensure that the disc is installed with the label side facing up. Check the region number of the DVD. This player cannot play CD-ROMs, DVD-ROMs, CD-R, etc. Insert a DVD, a VIDEO-CD or a CD.
5.1 channel sound is not being reproduced.	5.1 channel sound is reproduced only when the following conditions are met. : 1) The DVD player is connected with the proper amplifier. 2) The disc is recorded with 5.1 channel sound. • Check whether the disc being played has the "Dolby 5.1 ch" mark on the outside. • Check if your audio system is connected and working properly.
The ⊘ icon appears on screen.	The features or action cannot be completed at this time because : 1) The DVD's software restricts it. 2) The DVD's software doesn't support the feature (e.g., angles). 3) The feature is not available at the moment. 4) You've requested a title or chapter number or search time that is out of range.
Disc Menu doesn't appear.	Check if the disc has a Menu.
Playback mode differs from the Setup Menu selection.	Some of the functions selected in the Setup Menu may not work properly if the disc is not encoded with the corresponding function.
The screen ratio can not be changed.	The Screen Ratio is fixed on your DVDs.
No audio.	Make sure you have selected the correct Digital Output in the Audio Options Menu.
If you experience other problems.	Go to the contents and find the section of the instruction book that contains the explanations regarding the current problem, and follow the procedure once again. If the problem still cannot be solved, please contact your nearest authorized service center.

Identifying VCR Problems

Problem	Possible Solution
Unit won't turn on.	Make sure the unit is plugged into a working wall outlet or a cigarette lighter socket. Replace the DC car cord fuse. Press the POWER button.
Unit won't take video tape	Make sure the tape is window-side up with the arrow pointing away from you. Make sure there is no other tape in the compartment.
Unit didn't record a program.	Make sure the antenna or cable is connected and that the TV/VCR is receiving the broadcast signal. Make sure the record safety tab is intact.
Unit didn't record a timer program.	Make sure the unit was turned off. Check the programmed start and stop times. Make sure the time is set correctly.
There is no picture, the picture is distorted during video tape playback, or there is noise or streaks in the picture.	Adjust the tracking. Clean the video heads. Make sure there has been a recording on the tape.
You can't receive regular broadcasts.	Check the antenna or cable connections.
Rewind command doesn't work.	Make sure the VCR is not in pause mode. Make sure the tape hasn't already been rewound.
Fast forward command doesn't work.	Make sure the VCR is not in pause mode. Make sure the tape hasn't already been forwarded.
Picture is streaked during pause mode.	This is normal for SP and LP recordings.

Cleaning and Maintaining Your 3Way Combination Unit

With proper care, your 3way combination unit will give you many years of service. Please follow these guidelines to get the maximum performance from your 3way combination.

Placement

- Do not place the 3way combination near extremely hot, cold, humid or dusty places.
- Do not place the 3way combination near appliances with electric motors that create magnetic fields, such as vacuum cleaners.
- Keep the ventilation openings clear; do not place the 3way combination on a soft surface, such as cloth or paper.
- Place the 3way combination in a vertical position only.

Liquids

- Do not handle liquids near or on the 3way combination. Liquids that spill into it can cause serious damage.

Cabinet

- Never open the cabinet or touch the parts inside.
- Wipe your 3way combination with a clean, dry cloth. Never use water, cleaning fluids, wax, or chemicals.
- Do not put heavy objects on top of the cabinet.

Temperature

- If your 3way combination is suddenly moved from a cold to a warm place, unplug the power cord, and allow at least two hours for moisture that may have formed inside the unit to dry completely.

Using Your 3Way Combination Unit in Another Country

If you plan to take your 3way combination with you to a foreign country, please be aware of the different television systems that are in use around the world. A 3way combination designed for one system may not work properly with another system due to differences in the 3way combination channel frequencies

Learning About Video Cassette Tapes

Choosing the Proper Tapes

Use only video cassette tapes marked VHS with this VCR. Choose good quality tapes for best results.

Caring for Video Cassette Tapes

- Keep the tapes away from direct sunlight, heat or extreme cold.
- Insert tapes with the window side up and the arrow pointing away from you.
- Do not subject tapes to violent vibrations or shocks.
- Never try to take apart or splice a video tape.
- Do not open the cassette, touch the tape, or put anything inside the video tape cartridge.
- Read the instructions supplied with a video tape

Choosing the Correct Recording Speed

Your VCR is equipped with variable tape speed. You can play or record a tape at:

- **SP** (Standard Play)—the fastest speed,
- **SLP** (Super Long Play)—the slowest speed.

When you are playing a tape, your VCR automatically selects the proper speed, even if segments of the tape have been recorded at a different speed.

When you are recording, the slower the tape speed you use, the longer the tape runs and the more program material it holds. SP provides the clearest record/playback picture, but special effects such as still picture work best in the SLP mode.

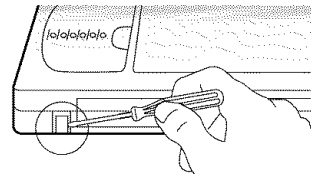
Use this chart to determine which tape speed to select when you are recording:

TAPE	SP	SLP
T-60	1hr.	3hrs.
T-120	2hrs.	6hrs.
T-160	2hrs. 40 mins.	8hrs.

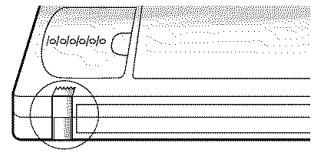
Using the Record Safety Tab

Most video cassette tapes have a safety tab that prevents accidental erasure. The safety tab is on the end of the tape opposite from where the arrow points.

The tab must be intact to record. You can record over and over on the same tape as long as the tab is intact. If you want to protect a tape from accidental erasure, break off the tab with a screwdriver, as shown here.



If you wish to erase a recorded tape or to record on a cassette with the tab removed, cover the hole with cellophane tape.



Sending Tapes to Another Country

Because various TV standards are used throughout the world, we recommend that you check for compatibility before sending your tapes to a foreign country. Tapes made on machines sold in the U.S.A. can be played back only on units that use the NTSC television system.

Specifications

Model	CFTD2083T
Voltage	AC 120V
Frequency of Operation	60Hz
Power Consumption	130 watts
Dimension	584 x 492 x 515 mm : 22.99 x 19.37 x 20.28 inches
Weight	28.5 kg ; 62.83 lbs

MEMO

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